Writing Slates and Schooling

PETER DAVIES

Although slate writing equipment is a common feature of archaeological assemblages from historical sites in Australia, archaeologists have paid these items relatively little attention. The main period of production spanned the period 1770–1900. Thereafter, there were calls to remove slates from the schoolroom because they were regarded as unhygienic. Archaeological evidence indicates, however, that slates persisted in use well into the twentieth century. This paper examines the role of writing slates and pencils in colonial Victoria, their function in education, and their presence beyond the turn of the century. Slates remained in use due to their economy and convenience, the lack of supplies of cheap paper, and the persistence of older models of classroom teaching.

INTRODUCTION

Writing slates and slate pencils were a commonplace item of everyday life in colonial Australia. Fragments are found in large numbers in both urban and rural domestic contexts and provide, along with ink bottles, a key archaeological indicator of literacy and numeracy. Historians and collectors have studied ink pens and graphite (lead) pencils in great detail (e.g. Finlay 1990; Nickell 2000; Petroski 1990; Whalley 1975). Archaeologists, however, rarely venture more about slates than that they show children were practising schoolwork and their parents were preparing shopping lists (e.g. Karskens 1999:162; Lawrence 2000:127). This paper explores the function and significance of slate writing equipment in colonial Victoria, and its persistence into the twentieth century. Evidence from a number of archaeological sites in Victoria reveals that slates were a frequent feature of nineteenth-century deposits. By the turn of the century, there were calls to remove them from classrooms on grounds of hygiene. However, evidence from Henry’s Mill, a forest sawmill and settlement in south-west Victoria, indicates that slates continued in use in both domestic and school contexts.

The first part of this paper explores the origins, form and manufacture of slate writing equipment. Although the main period of production spanned the period c.1770–1900, there is evidence that slate products were in use well before and after these dates. It then traces the archaeological occurrence of slates in nineteenth-century Victoria, their role in elementary schooling, and concerns about school hygiene. Archaeological evidence suggests that slates continued in use for many years thereafter. The reasons lie in the economy and convenience of slates, the paucity of cheap paper as an alternative writing medium, and the persistence of nineteenth-century modes of teaching and learning into the first part of the twentieth century.

WRITING SLATES AND PENCILS

Slate is a fine-grained argillaceous [clayey] rock with frequent mica and quartz inclusions, which splits or cleaves readily into thin slabs. Cleavage planes are usually independent of the original bedding and are formed by intense pressure at great depth. Slate occurs in various colours, principally blue, green, purple, grey and black, with the darker slates caused mainly by carbon-based inclusions. Major deposits of slate occur in Wales, Scotland, England, France, southern Germany and the north-eastern United States. In Australia, slate has been quarried in New South Wales around Goulburn and in Tasmania near Launceston (David 1950:376–8). In South Australia, a substantial slate tile industry developed in the Willunga district from the 1840s (Dunstan, M. 1977; Linn 1991).

Slate has been used in Wales since at least the Roman era, for roofing, flooring and paving. It was popular as a building material because it is weatherproof, durable and easy to work (Lindsay 1974:17–18). Writing slates have also been in use for centuries. In the late fourteenth century, Geoffrey Chaucer wrote in his Treatise on the Astrolabe ‘Than tok I alle the signes … and wroth so many signes, degrees, and minutes in my slate’ (Chaucer 1894–97 (II): 45). Leonard Digges advised astronomers in his Pantometria of the late sixteenth century that ‘ye must search Angles of position agayne, and marke them in the table or Slate’ (Digges 1591 (I): 28). Abraham Cowley’s sacred poem of 1651–4, Davides, refers to ‘Letters … painfully engrav’d in thin-wrought Plates, Some cut in wood, some lightlier trac’d on Slates’ (Cowley 1969 (II): 716–18). Archaeologically, several slate pencils were recovered from the wreck of the Batavia, which was wrecked off the West Australian coast in 1629 (Green 1989:167). Navigators at sea could use slates for calculations of position.

The main era of writing slates, however, appears to begin in the later eighteenth century, when developments in sea and land transport permitted the gradual expansion of slate quarrying in Wales and the growth of a substantial slate workshop industry. Prior to this, most slate pencils came from Europe and were known as ‘Dutch Pencils’ (Finlay 1990:58; Lindsay 1974:49). Touring Wales in 1778, Thomas Pennant reported that 136 000 writing slates were exported from Port Penrhyn in that year alone (Pennant 1810 (III): 87). By 1880 there were five manufacturers of writing slates in the city of Bangor.

Both roofing and writing slates were split by hand. The splitter took a block about three inches thick and tapped a chisel with a mallet against the edge of the block. A crack formed in the direction of cleavage, and slight leverage with the chisel separated the slate from the block. The usual thickness of roofing slate was about 1/8 to 1/4 inch (4 to 6.5 mm; Cullen 1990:28) and of writing slate, however, was made from a finer variety of material and was about 2.5 mm thick. Thereafter roofing slates were trimmed to size, often in a hand-operated guillotine. Writing slates, however, required further finishing processes, with sawing, grinding and polishing done with machinery. In addition, holes were sometimes drilled to permit several slates to be bound as a ‘book’, while parallel lines were also etched in the surface to guide the hand in writing.

Slate pencils were formed by cutting and turning sticks of soft slate, especially from deposits where cross-cleavage
occurred. The cylindrical form of slate pencils was achieved by forcing a length of slate of square section through a series of reducing tubes. The parallel flat facets identified on many slate pencil stubs appear to be a remnant of this production process. A hand-operated machine for this purpose was devised by a Cumbrian, Mr J. Brockbank, in 1811. He was able to produce about 1200 pencils a day, and his success encouraged him to install a water-powered version of his machine (Finlay 1990:58). Slate pencils could also be made by pressing moistened slate powder until it was firm enough to be made into pencils.

The squeak of slate pencils across slate boards made a noise that few care to recall. Nevertheless, slates provided an effective means of committing letters, words and numbers to a surface in temporary form. Pressing the softer slate pencil across the harder surface of the writing slate meant the latter acted as a file, shearing off and catching in its tiny recesses some of the slate pencil, leaving a near-white mark on a dark grey background. Chalk could also be used to mark writing slates.

Slate pencils were available in several forms by the later nineteenth century. Unadorned, pointed grey pencils were typically 5 ½ inches in length, and came in boxes of a dozen or 100 at a time (e.g. Anthony Hordern and Sons 1897:311). Alternatively, pencils also came with the lower half wrapped in paper printed with geometric designs. Slate pencils could also be encased in cedar wood like lead pencils, with a length typically 5 1/2 inches in length, and came in boxes of a dozen or 100 at a time (e.g. Anthony Hordern and Sons 1897:311). Alternatively, pencils also came with the lower half wrapped in paper printed with geometric designs. Slate pencils could also be encased in cedar wood like lead pencils, with a length of seven inches (e.g. Montgomery Ward 1895:115). Woodcased slate pencils sometimes featured a small swab of fibres at the end of the pencil for use as an eraser, while metal holders or ferrules were available to allow the pencil to be used and worn down to a short stub (e.g. Iacono 1999:27). Slate pencils could also be impressed with the name of the manufacturer. Two such examples marked ‘A.W. Faber’ were recovered from the Hyde Park Barracks in Sydney, dating them to the period 1839–1898 (Crook and Murray in prep).

Writing slates were made in several different sizes and formats. Standard sizes included 5 x 7, 6 x 9, 7 x 11 and 8 x 12 inches. The surface could be ruled with lines, divided into squares or left blank. A wooden frame, wire binding, felt strip or ribbon secured the edge of the slate and helped protect a surface in temporary form. Pressing the softer slate pencil across the harder surface of the writing slate meant the latter acted as a file, shearing off and catching in its tiny recesses some of the slate pencil, leaving a near-white mark on a dark grey background. Chalk could also be used to mark writing slates.

An important reason for the enduring popularity of writing slates and pencils was their economy and durability. In the mid-1850s in Victoria, Commissioners of the National Board provided schools with writing slates to sell at 1d. each and slate pencils at 4d. per 100 (Blake 1973:1 (I): 62). More than a century later, Anthony Hordern and Sons advertised slate pencils in boxes of 100 for 4½d., and 5 x 7 inch writing slates for 2d. (Anthony Hordern and Sons 1911:201). Larger slates, 8 x 12 inches, cost 3½d. each. In contrast, basic graphite (lead) pencils cost 4d. per dozen by the turn of the century, nearly eight times as much as slate pencils. The cost of paper was extra. Lead pencils had become a major industry by the mid-nineteenth century, especially in Germany, and by 1912 world production had reached two billion (Petroski 1990:205). It is uncertain which kind of pencil lasted longer in use, but in the school, home and office, slate pencils offered a substantially cheaper alternative.

Paper in Australia, especially writing quality paper, was a valuable commodity throughout this period, one to be used with care. Large quantities could not be provided to schools for pupils to practice their work, with the result that slates were used instead. Paper was first manufactured mechanically in Australia at a mill near Sydney in 1818, but the enterprise soon collapsed. It was not until the 1860s that substantial commercial production began again. In Sydney, a mill came into operation on the Georges River near Liverpool in 1867, while in Melbourne a mill on the south bank of the Yarra River below Princes Bridge began in May 1868 (Linge 1979:197, 425; Sinclair 1990:11–17). Another paper mill was established at Geelong in the late 1870s. Mills used linen and cotton rags, recycled paper and imported pulp to produce paper, including newspaper sheets and strong brown wrapping paper. Throughout the nineteenth century, however, a great variety and quantity of printing and writing paper continued to be imported into the Australian colonies.

Expansion of the industry to meet local demand required wood pulp. The technology of transforming trees into paper was first developed in Germany in the 1840s and transferred to the United States in the 1860s. The Pagenstecher brothers imported machinery to Massachusetts in 1867 that shredded logs to pulp by forcing their ends against a revolving water-cooled grinding stone. Rag fibre was initially added to give extra strength. The price of newsprint paper quickly fell, from 25 cents per pound in the early 1860s to less than two cents in 1897 (Hunter 1957:380). Wood as a raw material dramatically transformed the paper and newspaper industries in the U.S., and provided a material that conserved the supply of rags for the making of fine papers.

In Australia, the installation of rotary presses by the major metropolitan newspapers in the 1860s and 1870s meant they had to use imported newsprint to maintain production. By 1914, 100 000 tons of paper were imported into the Commonwealth, at a cost of £1 million per year (Shakespeare 1918; Trivett 1914:341). Ten years later, annual costs had risen to more than £5 million (Education Department 1924). The war years brought interruptions to imported paper supplies, and added urgency to the search for local sources. Eucalypts were the obvious answer, and during the 1920s and 1930s the Council for Scientific and Industrial Research began trials on different species and techniques to convert eucalypt logs into wood pulp. It was not until 1936, however, that this paper began to be produced on a commercial scale at Burnie in Tasmania, in 1940 at Maryvale, Victoria, and at Millicent in South Australia in 1941. The Second World War again disrupted the supply of imported paper, enabling the new mills to sell everything they could produce, regardless of its quality (Dargavel 1995:41–2; Moulds 1991:72–5; Watson and Cohen 1969). As wartime
restrictions eased in the late 1940s and 1950s, paper became much more widely available, and slates began to disappear from the classroom.

ARCHAEOLOGY OF WRITING SLATES

Writing slates and pencils are archaeologically commonplace for several reasons. They were manufactured on a relatively large scale, were sold very cheaply and they were used widely in domestic and educational contexts. Slate pencils also broke easily, and their narrow profile meant that fragments often fell beneath the floor. They were typically discarded once worn beyond a useable length, and are very stable upon entering the archaeological record.

Adrienne Ellis has described the archaeology of childhood in Victoria by analysing the frequency of child-specific artefacts recovered from a number of terrestrial and maritime sites (Ellis 2001). Her analysis reveals that slate pencils were a frequent component of excavated assemblages from the nineteenth century. Table 1 presents a summary of slate artefacts recovered from both urban sites (300 Queen Street, Cohen Place, 118 Franklin Street) and rural sites (Cornella, Dolly’s Creek, Viewbank) in Victoria, as well as two shipwrecks (Figure 1). In addition, recent investigation at Casselden Place in Melbourne during 2002 yielded 369 slate pencil fragments and four pieces of writing slate (Godden Mackay Logan 2004).

There have been very few schools formally excavated by archaeologists in Victoria. However, re-development in 2002 of the College of Surgeons site in Spring Street, Melbourne, revealed the remains of the National Model and Training School (Clark and Associates 2003). The school opened in 1854 as both a training establishment for teachers and a model school for the colony. It continued to provide education to pupils until it was demolished in the early 1930s. Most artefacts were recovered during excavation of a thick fill deposit relating to this demolition. Analysis identified 182 slate pencil fragments and 72 fragments of writing slate. These were recovered from contexts distributed across the site.

Apart from the College of Surgeons site, evidence for slate writing equipment derives mostly from domestic contexts. Classroom practice of the period normally involved school monitors distributing writing slates at the start of each lesson and collecting them again at the end for storage in a cupboard. Pencils, however, were small enough to be slipped into a pocket and taken home. Many of the pencil fragments recovered archaeologically may have derived from this practice. This may also explain the apparent paucity of writing slates identified at domestic sites in Victoria. Alternatively, the discrepancy may relate to the difficulty in distinguishing fragments of writing slate from slate roofing tiles. Nevertheless, it is clear that slate writing equipment was lost or discarded in substantial quantities within Victorian domestic contexts in the nineteenth century.

SCHOOLING AND SLATES

Elementary schooling in Victoria in the mid-nineteenth century consisted of a mix of private denominational and publicly funded common schools. Poorly qualified teachers instructed irregular numbers of pupils, often with very limited supplies of classroom equipment. James Bonwick recorded that tent schools on the goldfields had only a few books, ‘but at such an extravagant price that the parents would not buy them … even the common little slates were half-a-crown [2s. 6d.] apiece’ (Bonwick c1862:33). School attendance was often disrupted by family moves to new goldfields. In 1862, ‘ragged’ schools were founded in Melbourne for urban children whose parents could not afford the fees, and these had enrolled over 1000 children by the end of the decade (Kociumbas 1997:104). There were fewer educational opportunities in rural areas, with teachers, and the funding to employ them, hard to come by.

Political and economic changes over this period lent greater urgency to improving literacy and numeracy of working people. New technologies, increasing British capital and urbanisation required a more educated, better skilled workforce. Universal education also served to counter the ‘threat’ of trade unionism and international socialism heard more and more in the factory, shearing shed and street. School activities were to teach greater discipline and submission to authority. State education was thus overhauled in all Australian colonies in the 1870s and 1880s, gradually introducing compulsory, full-time attendance (Kociumbas 1997:119).

In Victoria, the Education Act of 1872 meant that schooling was to be free, secular and compulsory, with children attending between the ages of six and 15. Minimum attendance was 120 days a year, increased to 160 days by 1890. Teachers in the nineteenth century were on a fixed

Table 1: Slate writing equipment recorded at Victorian archaeological sites (source: Ellis 2001:31–46).

<table>
<thead>
<tr>
<th>Occupation dates</th>
<th>Slate pencils</th>
<th>Writing slates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>fragments</td>
<td>MNI</td>
</tr>
<tr>
<td>300 Queen St</td>
<td>1849-c. 1860</td>
<td>2</td>
</tr>
<tr>
<td>Cohen Place</td>
<td>c.1854-1923</td>
<td>91</td>
</tr>
<tr>
<td>118 Franklin St</td>
<td>c.1872-1900</td>
<td>17</td>
</tr>
<tr>
<td>Cornella</td>
<td>c.1872-1920s</td>
<td>5</td>
</tr>
<tr>
<td>Dolly’s Creek</td>
<td>c.1857-1888</td>
<td>11</td>
</tr>
<tr>
<td>Viewbank</td>
<td>c.1844-1875</td>
<td>21</td>
</tr>
<tr>
<td>Loch Ard</td>
<td>1878</td>
<td>3</td>
</tr>
<tr>
<td>Fiji</td>
<td>1891</td>
<td>6</td>
</tr>
</tbody>
</table>

Fig. 1: Map of Victoria showing location of sites mentioned in text.
salary which increased according to how many pupils passed examination. This 'payment by results' system was dismantled in 1906 (Blake 1973 (I):322). Nevertheless, a formal and restrictive teaching syllabus remained, setting out what was to be taught on a month by month basis. There was a heavy emphasis on repetition and rote learning in the classroom of this era. Words and letters had to be copied, laboriously and exactly, over and over. History and geography consisted largely of the memorization of dates, capes and bays. The daily routine focused on the three Rs, with severe discipline crushing individual initiative and expression. Every child was regarded as capable of learning the work if only he tried hard enough. Pupils would normally spend six to eight years in primary school, without ever having the opportunity to compose an original expression (Blake 1973 (I):295).

Slates were generally only used by school children in the most junior grades. Arthur Orlebar reported in 1862 that 'Slate Writing has become … an almost universal preliminary to paper writing' (Orlebar 1862:5). Teachers introduced pupils to slate writing at the same time as they began to read, thus learning to shape the letters as they grasped their sounds and meaning. Alternating broad and narrow lines scored across the slate helped guide the hands of young pupils learning to copy and shape their letters from models on the blackboard. The lines matched blackboards ruled for writing instruction into copybooks, where the body of each letter was formed between the narrow lines and the top and tail of letters extended above and below. The reverse side of slate boards was typically used for arithmetic, as well as for drawing. Blake notes that even by 1870 such an approach to handwriting was regarded as 'old-fashioned' (Blake 1973 (I):110). It was also argued that poor writing standards often derived from the bad example set by teachers and monitors. By Class III, however, school children in Victoria had normally passed beyond the need for slates in shaping letters and used ink and copybooks instead. Writing slates continued to be used for arithmetic exercises (Blake 1973 (I): 292; Dean 1890–91:96; Horn 1989 6–7).

Prior to the advent of school desks with built-in table tops, slates had to be balanced awkwardly across the knees and cradled with one arm. The narrow profile of slate pencils, however, meant they were a poor mechanism for allowing pupils, at six and seven years of age, to learn to write. While lead pencils were generally \( \frac{1}{4} \) inch (6.5 mm) thick, slate pencils were often narrower, about 4.5–5 mm thick. With less developed motor skills, young children were less able to maintain the necessary control over a slate pencil, while grasping the board with the other hand, and form letters with the degree of care usually demanded by handwriting systems of this period. Small fingers were also more likely to drop slate pencils and lose them through cracks in the floor. To avoid this, a small hole could be drilled through the wooden frame and the pencil attached with a length of string.

By the late nineteenth century, writing slates and slate pencils were beginning to be regarded as unhygienic and pressure mounted to remove them from the classroom. As pupils so often neglected to bring a coat with which to clean their slates, the easiest method was to spit on the surface and wipe it with a sleeve. Parents objected because clothes wore out more quickly. Some slates became so greasy it was impossible to mark them, so they had to be taken home and scrubbed. The practice of a school monitor collecting school slates at the end of the day and redistributing them the next meant that any infection on the slate surface was soon spread around. Pupils also put slate pencils into their mouths. In 1909, a School Medical Officer in Bournemouth succeeded in cultivating the diphtheria bacillus from the slate pencils belonging to a class (Slate Trade Gazette 1909).

Attempts to remove slates from schools and improve hygiene were part of the wider public health movement of the era. Building on the germ theory of disease developed by Pasteur, Koch and others in the 1860s and 1870s, health authorities began to improve water supply, street drainage, rubbish collection and sewage systems. Most of these measures began to be implemented in Australian cities by the later nineteenth century (Dingle and Rasmussen 1991; Dunstan, D. 1984:121–51; Wong 1999). Government schools functioned as part of the state, and genuine efforts were made to reform sanitary measures in education. Regular inspections and adequate cleaning of classrooms, along with appropriate lighting, ventilation and heating, and fly-proofing of the toilets, were all recommended to improve health standards in schools. The use of a common drinking cup and school towel ceased, recognized as potent sources of infection. The cleaning of slates by spitting on them and wiping with a sleeve was no longer allowed, at least in theory. Talks on health, correct posture, public behaviour and, for older children, the parts of the body, were all recommended.

Apart from the potential for infection, however, there was also recognition that slates could be beneficial. Some authorities were concerned about the effect of prolonged exposure to paper on children's eyesight. It was believed that continuous use of indistinct lead pencil marks on a bright white background would weaken and harm the eyes. Slate writing was thus regarded as more benign.

Historians have suggested that the use of slates in schools was in decline by the 1890s (e.g. Barcan 1988:158). By the turn of the century in England, the Board of Education was also discouraging the use of writing slates in school on grounds of hygiene (Lindsay 1974:258). However, slates appear in retail catalogues until the beginning of the First World War, and Paul Wieland recorded that wood-cased slate pencils were still available in the United States in the early 1930s (Wieland 1933:91). Archaeological evidence from Henry's Mill also indicates that writing slates and pencils continued to be used well into the twentieth century. The following section describes the slate writing equipment recovered from the mill, and the context within which slates persisted in use during this period.

**HENRY'S MILL**

Henry's Mill was established in 1904, deep in the Otway Ranges of south-west Victoria. The isolation of the site meant that around 100 people lived permanently on site. The settlement featured small timber huts for single men and wooden houses for married men and their families, along with a store, boarding house and post office. A school opened in 1909, nestled close among the family houses, to cater for the growing number of children at the mill. The schoolroom was 26 feet long and 13 feet wide (8 m x 4 m), adequate for the initial enrolment of 16 pupils, but much too small for the 38 children crammed in by 1923. In 1927 the mill was destroyed by fire and the site was gradually abandoned (Davies 2001; 2002; in press).

Houses at the mill were leased to a succession of short-term working tenants over a period of more than 20 years. Debris from each house thus represents the conflation of multiple episodes of occupation. The remains of three houses at the mill were excavated in 1998, each within a 5 m x 5 m trench, to a maximum depth of 20 cm. The main structural features identified were fireplaces and oven settings. A large amount of domestic material was recovered. This included at least 30 slate pencils, one graphite pencil core, fragments of four writing slates and two glass ink bottles (Table 2). Slate pencil fragments varied in length from 17 mm to 62 mm, with individual pencils identified by a worn point at one end. Two
Writing slate 6 2 4 1 1 1
Lead pencil 1 1
Slate pencil 35 17 14 11 3 2

methods. Advertisements in the catalogue of Anthony Hordern
availability of paper, and the persistence of older teaching
unhygienic. This relates to the economy of slates, the
the twentieth century, despite calls to remove them as
slates lingered on in remote rural areas, when they had already
period of their supposed decline. It is possible that the use of
slate material was recovered from the site, especially in the
relatively small scale of excavation, a significant quantity of
there is no evidence for home schooling at the mill. Given the
presence of slates and the isolation of the site, however,
suggests that these items were being brought home from
school, a distance of only a few metres in some cases. Despite
the correlation between slates, toys and children, and suggests that parents
may have used slates for their own writing needs as well. The
recovery of slates from domestic contexts at Henry’s Mill also
suggests that these items were being brought home from school, a distance of only a few metres in some cases. Despite
the presence of slates and the isolation of the site, however,
there is no evidence for home schooling at the mill. Given the
relatively small scale of excavation, a significant quantity of
slate material was recovered from the site, especially in the
period of their supposed decline. It is possible that the use of
slates lingered on in remote rural areas, when they had already
been replaced in metropolitan contexts.

Writing slates and pencils thus continued in use well into
the twentieth century, despite calls to remove them as
unhygienic. This relates to the economy of slates, the
availability of paper, and the persistence of older teaching
methods. Advertisements in the catalogue of Anthony Hordern
and Sons for 1911 indicate that the cost of slate writing
equipment was only a little higher than it had been half a
century earlier. Slates were thus a cheap option for use in the
home, school and office. Writing slates could also be used
again and again, unlike paper, which was essentially restricted
to a single use.

**CONCLUSION**

It was widely argued from the late nineteenth century that
slate writing equipment was unhygienic. Children sucking on
the ends and spitting on the boards, and having these circulate
around the classroom, was held, probably correctly, to
promote the spread of infection. On the other hand, writing
slates were at least non-absorbent and thus readily cleaned and
disinfect, and their use continued into the 1920s and 1930s.
Slate pencils persisted because they were considerably
cheaper than lead pencils, and writing slates were highly
durable. Frequent losses of small slate pencils, evident in their
frequent archaeological recovery from sites like Henry’s Mill,
were compensated for by their ready availability and economy
of purchase. Slates also had the advantage over paper and ink
of being erasable and reusable.

Although new subjects, such as nature study and domestic
science, were introduced into the curriculum soon after 1900,
the older emphases on discipline and rote learning remained a
firm fixture in the classroom. Slates were also an entrenched
feature of classroom furniture and traditional teaching
methods. Pupils inscribed their exercises on a slate, had the
work checked by the teacher, and then rubbed it off for the
next lesson. Portable and durable, slates were popular for so
long because they were convenient, especially in teaching the
youngest pupils the rudiments of language and arithmetic.
Slates also endured because large quantities of paper were not
readily available for use in Australian classrooms. The mass
production of paper from eucalypt pulp which began in the
1940s thus had a significant impact on schooling. It allowed
paper to be used on a much larger scale than ever before, and
contributed to the replacement of slates. In spite of this, slates
disappeared only slowly from the Australian classroom in the
years following the Second World War. They were still used,
for example, in some Queensland schools at the beginning of
the 1960s. Elsewhere they continued in use beyond even this.
In India, for example, writing slates and pencils were still
being manufactured and sold in the 1990s (Fulekar and
Khan 1995).

The education received by children in rural districts of
Australia was often limited by the demands of household
chores and distance, as well as by boredom and teaching
methods of the day. Illness and frequent family moves also
undermined the effectiveness of elementary education. Rote
learning was common, and pupils rarely had the opportunity
to engage critically with the learning process. The youngest
pupils struggled to manipulate slate writing equipment with
the dexterity often required by handwriting systems of the
period. Many left school with only the most basic skills in

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**Table 2: Slate writing equipment recovered from Henry’s Mill (Davies 2001:89–90).**

<table>
<thead>
<tr>
<th></th>
<th>House A</th>
<th></th>
<th>House B</th>
<th></th>
<th>Dump C</th>
<th></th>
<th>House E</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>fragments</td>
<td>MNI</td>
<td>fragments</td>
<td>MNI</td>
<td>fragments</td>
<td>MNI</td>
<td>fragments</td>
<td>MNI</td>
</tr>
<tr>
<td>Slate pencil</td>
<td>35</td>
<td>17</td>
<td></td>
<td>14</td>
<td>11</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Lead pencil</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing slate</td>
<td>6</td>
<td>2</td>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ink bottle</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Fig. 2: Fragment of writing slate from House A, Henry’s Mill**

*(photo A. Ellis).*

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literacy and numeracy. Nevertheless, slates provided a medium of expression when few practical classroom alternatives were available. Their archaeological visibility opens a small window on education practices in Australia of the era.

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BIBLIOGRAPHY

BARCAN, A. 1988. Two Centuries of Education in New South Wales, UNSW Press, Kensington, NSW.


EDUCATION DEPARTMENT 1924. Victorian Education Gazette and Teachers’ Aid 20 May 1924.


FINLAY, M. 1990. Western Writing Implements in the Age of the Quill Pen, Plains Books, Carlisle, Cumbria.


LASSETTER 1911. Lassetter’s Commercial Review No.26, partial facsimile reprinted as Australia in the Good Old Days, Ure Smith, Sydney.


PENNANT, T. 1810. Tours in Wales, 3 volumes, printed for Wilkie and Robinson, etc., London.


