

# Analysis of the Clay Tobacco Pipe Assemblage From The Front Street Site (AjGu-15), Toronto

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*The clay tobacco pipe assemblage consisting of 222 pieces from three seasons of archaeological investigation at the Front Street site (AjGu-15), Toronto, Ontario is analyzed. A new series of dates for the Montreal pipe industry is advanced and a use-wear analysis of the Front Street assemblage presented in an attempt to refine the way in which pipes are examined by historic archaeologists. Chronologically, the Front Street assemblage falls within the period of occupation of the Parliament Buildings and presents some interesting anomalies in terms of the origin of some of the pipes and in the number of Canadian-made pipes.*

## Introduction

In 1982 test excavations were carried out in downtown Toronto on land once occupied by the Parliament Buildings of Upper Canada. Located on the north side of Front Street between John and Simcoe streets on land owned by the Canadian Broadcasting Corporation, the site was scheduled to be developed in late 1986. Salvage operations were initiated in 1983 and 1984 with support from the Federal and Provincial governments. As a public awareness project, an interactive display unit (INSITE) was set up and a field school run by the Toronto Board of Education (Smith 1985:7). Assistance was also provided by the Foundation for Public Archaeology and the Ontario Archaeological Society's volunteer program.

The recorded history of the CBC land goes back as far as 1794 when the block was set aside for government use by Governor John Simcoe. It was not until 1826, however, that the provincial legislative buildings were designated for the area. Construction began in 1829 and was completed in 1832. Sessions of Parliament were held in the building until 1842 when parts of the complex were occupied by King's College - later to become the University of Toronto. The faculties of Law, Arts, and Medicine occupied the buildings until 1848-49 when renovations to prepare for the sessions of a United Parliament were begun. From 1850 to 1877 the buildings served various functions including the seat of Government, a military barracks and an insane asylum. From 1892 until the demolition of the

building in 1902-03, the complex was largely unoccupied. Demolition made way for the Grand Trunk Railroad freight sheds and marshalling yards which occupied the land until 1965. The Canadian National Railroad took possession of the land in 1920 when they bought the Grand Trunk Railroad. In 1965 the freight sheds were razed and the block turned into a parking lot (Smith 1985:7).

## Methodological Considerations

The Front Street site clay tobacco pipe assemblage is made up of 222 fragments recovered during the 1982 test excavations and 1983 and 1984 salvage projects. In the past, clay pipes have been discussed under the rubrics of both Ceramics and Personal Items, often briefly and incompletely described. An attempt to compare the Front Street assemblage with other nineteenth century historic sites in Eastern Canada resulted in partial failure. Few assemblages have been published in a manner which makes them comparable, even though there are more than 50 historic sites for which some form of pipe description exists. The analysis presented here is an attempt to treat the pipe assemblage as a unique artifact class. A use-wear analysis is presented so that some understanding of clay pipe alteration in the historic period can be developed. A descriptive nomenclature is first advanced to facilitate summarization of pipe attributes.

Figure 1 describes pipe constituent elements used in the following analysis. Glazed stems are evaluated using Munsell Colour charts in an attempt to quantify overall site glaze colour variation. Use-wear descriptions are categorized by the percentage of pipe surface burning and tar/nicotine staining (Table 1). These percentages are subjective evaluations of the observable alteration of the pipe's surface. Tables 2 and 3 quantify the pipe elements and chronological position of maker's marks present in the Front Street assemblage (Fig. 2).

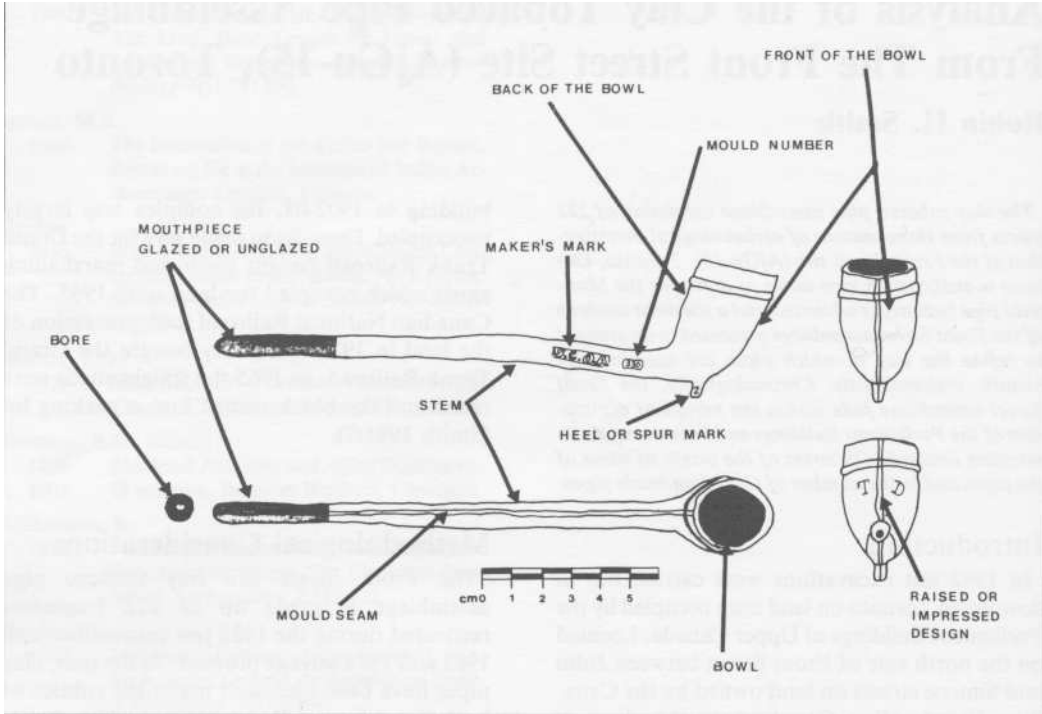


Fig. 1  
Clay tobacco pipe constituent elements used in the analysis of the Front Street assemblage.

TABLE 1 Nicotine

<b>Staining and Bowl Burning</b>											
<b>Nicotine Staining on Outside of Stem and Bowl Fragments</b>											
Percentage of Staining	5	15	20	40	60	75	80	95	100 (%)		
Stem Fragments											
Quantity	1	1	1	2	1	2	0			1	
Bowl Fragments											
Quantity	0	0	0	0	0	0	0	1	1		
<b>Bowl Burning on Inside and Outside of Bowl Fragments</b>											
Percentage of Burning	25	30	40	50	60	70	75	80	85	95	100(%)
Bowl Fragments - Inside Burning											
Quantity	2	4	1	2	5	1	3	2	1	1	14
Bowl Fragments - Outside Burning											
Quantity	0	0	0	0	0	0	1	0	0	0	0

TABLE 2

Element Representation	no.
Unglazed stem fragments	64
Glazed stem fragments	15
Stem fragments with maker's marks	29
Undecorated bowl fragments	58
Decorated bowl fragments	31
Glazed mouthpieces	11
Unglazed mouthpieces	3
Complete bowls	7
Complete bowls with maker's marks	2
<b>Total pieces</b>	<b>222</b>

TABLE 3

Maker's Marks	Date	No.
Henderson Montreal	1846-1876	9
Bannerman Montreal	1870-1902	5
Dixon's Montreal	1883/85-1892	1
W & D Bell Quebec	1862-1881	2
McDougall Glasgow	1846-1891	3
W. White Glasgow	1805-1891	2
Murray Glasgow	1830-1861	3
Glasgow	pre-1891	1
J. Hyde Guildford	1859-1893	1
Peter Dorni 383 (McDougall)	circa 1880	1
HB	(?)	1
353	(?)	1
<b>Total</b>		<b>30</b>

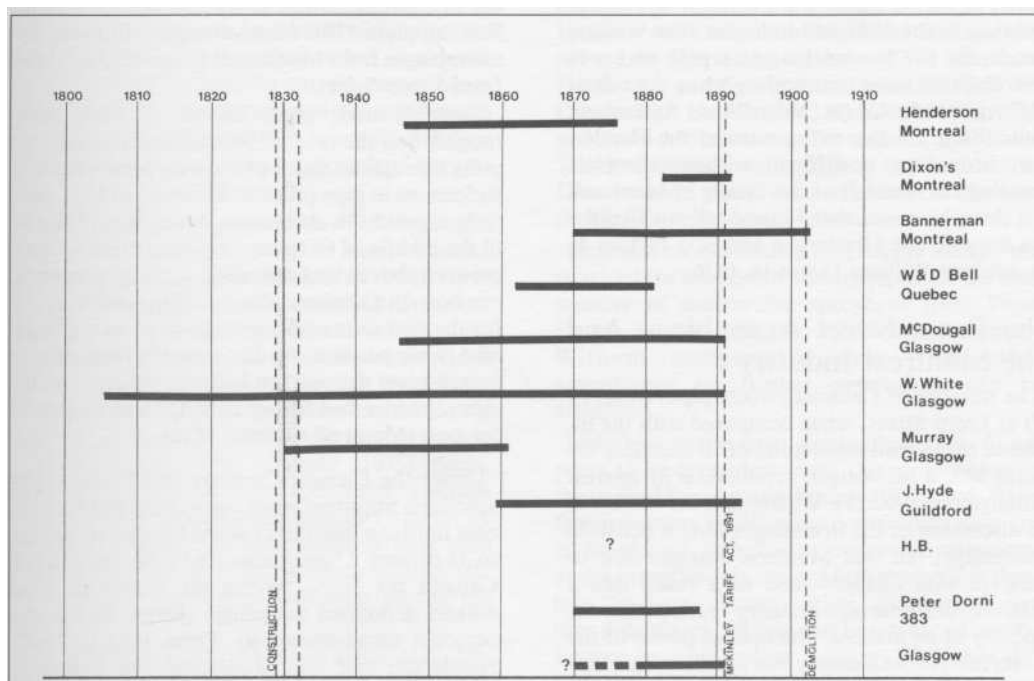


Fig. 2  
Front Street pipe chronology and associated dates.

## Background Discussion

The dates for Bannerman/Montreal, Henderson/Montreal and Dixon's/Montreal used in this paper differ from commonly used chronologies (Walker 1977a, 1977b) since they are based on the writer's research of the Montreal industry.

The Bannerman pipe factory at Brant Lane was opened 1870; was listed in the 1903 assessment roll as being a vacant building (St. Marie Ward Assessment Roll 1903). The 1907 date advanced by Walker refers to the probable end of rope manufacture at Bannerman's Lachute, Quebec rope factory and not to the closing of the Brant Lane establishment. Bannerman operated a small pipe manufactory prior to 1870, the products being marked R. Bannerman/Montreal rather than Bannerman/Montreal.

Maker's marks for pipes from the Canada Pipe Works, owned and operated by William Henderson Dixon, reflect partnership changes. In 1885, James McKean Henderson Dixon, William Dixon's brother, was formally registered as a partner in Canada Pipe Works (Palais de Justice

1885). The assessment rolls for 1883 and 1884 indicate, however, that James Dixon was already in partnership with his brother prior to the formal registration in 1885 (St. Marie Ward Assessment Rolls 1883, 1884). The Canada Pipe Works closed its doors in 1892 and not 1894.

Lovell's Montreal directories indicate that the pipe concern continued until 1894. However, the assessment rolls show that pipe production terminated in 1892 with the sale of the property and conversion of the building into housing units (St. Marie Ward Assessment Rolls 1892). The Dixon/Montreal mark is the earlier of the two and refers to the period from 1876 until 1883-85 when William Dixon was the sole owner of the concern. The Dixon's/Montreal mark refers to the period from 1883/85 until the company closed in 1892.

The dates for Henderson/Montreal marked pipes can be refined to some degree. All of the Hendersons working as pipe makers in Montreal were of the same family and the different Henderson marks are all marks of the same company. 1847 is commonly used as the chronological beginning of the Montreal pipe industry based on

entries in the St. Marie ward assessment rolls. A notation in the 1847 roll indicates that William Henderson Sr. was working as a pipe maker in 1846 and had taxes outstanding when the roll of 1847 was conducted (St. Marie Ward Assessment Rolls 1847). Further refinement of the Henderson chronology is difficult without complete genealogical research of the family in Montreal. It is clear, however, that James McKean Henderson Sr. sold the Henderson and Son factory to his nephew William Dixon in 1876.

### The Front Street Assemblage And The Montreal Industry

The number of Canadian-made pipes (total of 18) at Front Street, when compared with the incidence of Scottish pipes (total of 10 including the Dorni 383, a McDougall product), is of interest (Anonymous 1900:15). Walker (1977a, 1977b), in his discussion of the Ermatinger House (Cdlb-2) assemblage, felt that Montreal was not able to compete with Glasgow and as a result had a relatively unstable pipe industry - reflected in the mobility of its makers. The market power of the Montreal/Quebec industry has not been fully appreciated. At sites such as Pointe Fortune, 61.5% of marked stems are Canadian-made and only 30.8% Scottish. At Brown Tavern (BhFw-3) there

are 39 Canadian-made compared with only eight Scottish pipes. This observation is reinforced by assemblages from MacDonell House (BjFo-2) and from Front Street.

Canadian-made pipes appear to have been roughly half the price of Scottish and English imports throughout much of the nineteenth century. References to pipe prices in Montreal in 1852 partially support this conclusion. From July 1852 until the middle of October, imported pipes sold at between sixteen and seventeen shillings six pence per box. In October, Montreal pipes were listed for the first time and the cost was seven shillings nine pence per box. At that time the price of imported pipes dropped to between fourteen shillings six pence and fifteen shillings and six pence per box (Montreal Gazette 1852).

Under the Canada Customs and Excise tariff schedules imported pipes were taxed at 12.5 percent until the late 1890's when the rate increased to 35 percent. Unmanufactured pipe clay entered Canada tax free - giving the Canadian pipe makers a decided advantage (David McIntosh: personal communication). From 1864 to 1868, Henderson and Son, located at 114 Colborne Avenue, had a business of \$25,000 and a good credit rating. These are not the figures of a firm struggling with European competition (R.G. Dun

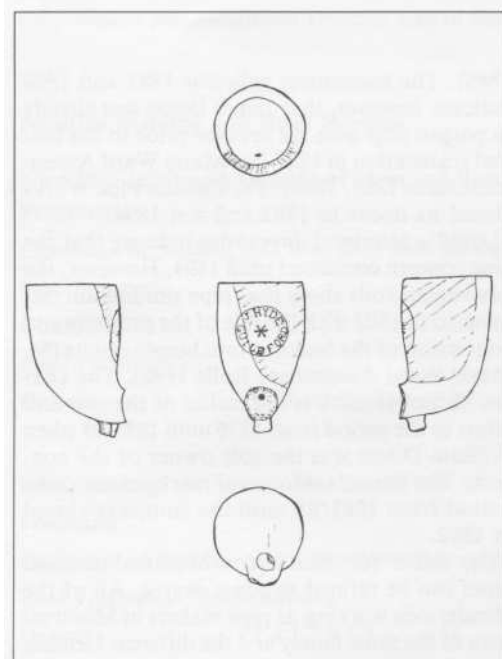


Fig. 3  
J. Hyde Guildford pipe. Shading details area of burn.

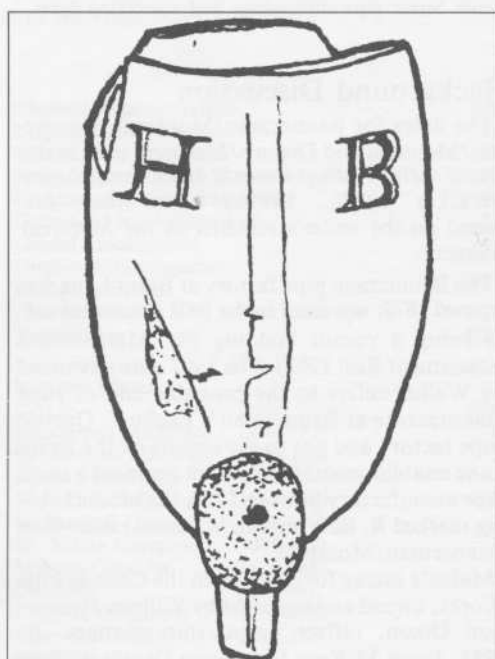


Fig.4  
H.B. pipe. Letters are raised.

and Company 1864-1868). Finally, it should be noted that the apparent instability within the pipe making area of Montreal may reflect incorporation of the Quebec suburbs into the city of Montreal. The result of incorporation was a redesignation of the cadastre, as well as continued civic renumbering of properties as more land became part of the city of Montreal.

The appearance of a J. Hyde Guildford pipe (Fig. 3) at Front Street or even in North America is interesting. Atkinson indicates that 'John Hyde bought William Swinyard's business at Guildford in 1858 and the following year moved to a new site. In 1893 it was resold to the Swinyard family, to a later William who in turn moved the business to Aldershot where it remained until 1926 satisfying military demand' (D.R. Atkinson: personal communication). Oswald (1975) notes, however, that Hyde was not an exporter. The pipe might well have been purchased in England by a visiting Canadian Parliamentarian or have been brought over by one of the military officers stationed in the Parliament Buildings during the 1860's.

The HB pipe (Fig. 4) presents a problem. The mark (44.122b.68) is in raised letters at the back of the complete bowl. No pipe with such a mark is known from eastern Canada. It may be a pro-

duct of the Hamlin Brothers of Detroit. The Hamlins were originally Montreal makers who moved to Detroit in the late 1870's when the Henderson and Son concern was sold to W.H. Dixon. Pipe clay destined for Detroit was shipped from Montreal via Toronto on the Grand Trunk Railroad, so it is not impossible that Detroit-made pipes were available in Toronto (E.M. Green: personal communication).

Bore size measurements (Fig. 5) are usually not provided for nineteenth century pipes. Of the total number of measurable specimens from Front Street, 94 fall into the 2 mm bore category. Without comparative data from other assemblages no further conclusions can be advanced.

Mouthpiece and stem glaze colour (Fig. 6) appears to be dependent upon the composition of the unfired liquid glaze. Walker (1977a:146) states that a number of different compounds were used for glazing, including potassium permanganate and a green lead mixture. Until research is done into the chemical composition of nineteenth century pipe glazes, all that can be advanced are the figures for each colour category. Whether different manufacturers used different glaze mixtures or whether the colour variation simply reflects variable firing temperature is not known.

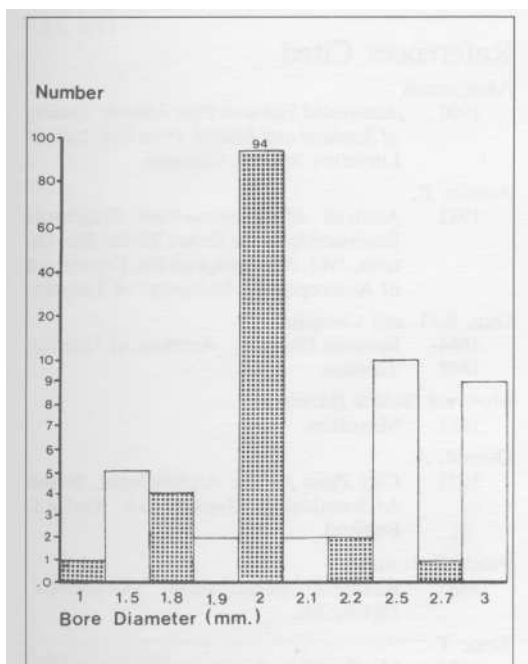


Fig. 5  
Bore diameter frequency. Measurements in mm.

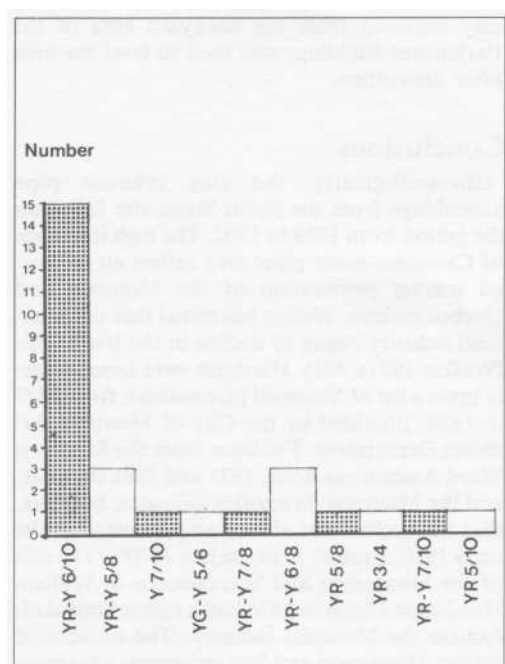


Fig. 6  
Glaze colour frequency. Munsell colours.

Clay pipe use-wear falls into two broad categories which can be defined as mechanical and physio-chemical alteration. These two divisions can be further subdivided into a number of types of alteration. Mechanical alteration includes chipping, chewing and polishing/burnishing which occurs on the outside of the pipe. Physio-chemical alteration includes match burning, tobacco burning and tar/nicotine staining which can occur on the inside and outside of the pipe (Smith and Gerrard 1986).

Tar/nicotine staining (Table 1) generally reflects the degree of use of a clay pipe. Nine of the twelve Front Street stems with staining can be grouped as having stained surfaces greater than 40 percent. Staining of this type is believed to reflect use for more than one week. Tar/nicotine staining on bowl fragments reflects heavy use and usually occurs after two to three weeks of continuous smoking. Bowl burning is also an indicator of use and dependent on original location. Twenty-seven pipes have greater than 60 percent burning on the inside. Burning on the outside usually reflects match burning.

For a number of reasons, no attempt has been made to examine the spatial distribution of the pipe fragments since it is believed that the demolition of the Parliament Building complex in 1902 effectively destroyed any original depositional contexts. It also appears that an artifact-bearing clay removed from the backyard area of the Parliament Buildings was used to level the area after demolition.

## Conclusions

Chronologically, the clay tobacco pipe assemblage from the Front Street site falls into the period from 1829 to 1902. The high incidence of Canadian-made pipes may reflect an increased market penetration of the Montreal and Quebec makers. Walker has stated that the Montreal industry began to decline in the late 1870's (Walker 1977a:362). His dates were based largely upon a list of Montreal pipe makers, from 1847 to 1878, provided by the City of Montreal Archives Department. Evidence from the St. Marie Ward Assessment Rolls, 1871 and 1881 censuses, and the Montreal directories indicates, however, that the decline was abrupt and occurred in the early 1890's, rather than the late 1870's. The sale of the Henderson and Son concern to William Henderson Dixon in 1876 had a rather limited effect on the Montreal industry. The number of former Henderson and Son employees who moved to Detroit was small and offered little competition to the Montreal industry.

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Finally, to all those who assisted in spirit I extend my sincerest thanks. All omissions and short-comings are the responsibility of this writer alone.

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