



# Provincial Archaeology Office Annual Review 2019

Provincial Archaeology Office  
Department of Tourism, Culture, Industry and Innovation  
Government of Newfoundland and Labrador  
April 2020 Volume 18



Cover: Unruly Archaeology, spillway gate near Twin Falls, Labrador.  
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# Archaeology at Ferryland 2019

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**Figure 1: Aerial photograph of Feature 217. Note the three hearth/furnace features along the west side of the building (Photo credit: James Williamson)**

The 2019 field season was overshadowed by the loss of a dear friend and mentor, Dr. James A. Tuck. Jim first became interested in Ferryland's past in the late 1960s following conversations with local resident Arch Williams. Arch was convinced that the remains of George Calvert's 1621 colony was buried underneath the gardens and houses lining Ferryland's sheltered inner harbour or Pool. His assertion proved correct. In the mid-1980s, Jim and a small crew of MUN undergraduate

students conducted limited excavations around the Pool as part of the Archaeology Unit's Field School (1984, 1986). The discovery of substantial 17<sup>th</sup>-century stone features and associated artifact-rich deposits was beyond anything that Jim anticipated; he reluctantly backfilled the site until a time when funding became available to conduct a more thorough, multi-year excavation (Tuck 1985, 1989, 1993). Six years later, in 1992, archaeology began anew thanks to a federal-provincial funding agreement. Jim directed these excavations, serving in this capacity up to and beyond his retirement from Memorial University in 2005. Throughout 28 years of ongoing excavations at Ferryland, Jim's passion for and commitment to this archaeological site — and to the people of Ferryland — never diminished. His legacy and influence will be felt for decades to come.

With a sombre start to the 2019 season, the field and laboratory crews at Ferryland continued our investigation of a 1620s-era masonry structure (Feature 217, Area D) located outside the original parameters of the 4 acre fortified settlement; a previously unknown structure for which Jim and I had been in continued email contact over the last few years. The ideas and theories presented below are therefore as much Jim's as mine. In conjunction with these excavations, we also excavated a 1x3 metre unit (in Area B) inside the settlement to expose an additional seg-



ment of the 1620s cobblestone street (Feature 56). This operation coincided with field and laboratory research conducted by MA student Eileen Bethune during summer 2019, and whose preliminary field-work is outlined in this report.

Upon completion of what is now our third season of excavation on Feature 217 in Area D, we can state with confidence that the clay-bonded stone structure was built sometime in the early 1620s, occupied into the 1630s and whose principal/initial purpose involved one or more industrial activities. This

Second, the architectural features of this building are anomalous by comparison with the domestic structures we've found at Ferryland, suggesting a non-domestic function. For example, of the six or more dwellings we've uncovered (inside the village) over the last 28 field seasons, all are rectangular in plan, floored in wood and contain a single hearth for heating and cooking. By comparison, Feature 217 is a perfect square (Figure 1), measuring 6.4m (21ft) on a side (exterior dimensions) with a simple dirt floor, a disproportionately large 1.21m (4ft) wide

**Figure 2: Feature 217d: alcove in the southwest corner of the building**



industrial theory is based on several key observations. First, the building is positioned 30 metres outside the original fortified village, whereas all other known structures from the 1620s, both domestic and work-related, are located inside the fortifications. Such a placement seems illogical from a defensive standpoint considering that there was ample space inside the 4 acre settlement; however, given the presence of several interior hearth/furnace features, this structure may have been purposefully isolated from the rest of the colony in case of accidental fire.

doorway, and three hearth or furnace features, all of which are set into the west wall of the building. In the center of the west wall is a .91m by 1.52m (3ft by 5ft) cobblestoned hearth likely used as the primary heat source, and immediately north is the base of a roughly circular furnace 1.06m (3½ft) in diameter. At the southwest end of the building is an oddly-shaped alcove-like feature .91m wide by .76m deep (3ft by 2½ft) in which fires were also set, as evidenced by a thick lens of fire-reddened clay and sand, as well as charred rock, coal and brick fragments (Figure 2).



Within such a small 4.87m by 4.87m (16ft by 16ft) interior space, three activities requiring heat and fuel is curious indeed. Furthermore, the incorporation of these features as part of the original construction demonstrates that this was a purpose-built structure rather than a domestic building whose use was later modified due to changing circumstances.

Finally, the associated by-products recovered from inside and outside this building point to one or more proto-industrial activities — or in the very least,

English colony in Cupids in 1610, and that English colonists at Jamestown in Virginia had earlier experimented with a ‘trial of glass’ in 1608 and again in 1620. Interestingly, George Calvert was an investor in the Virginia Company and was no doubt aware of these early attempts at glassmaking. The discovery of small drips (or trails) of glass inside this building at Ferryland, as well as patches of fine golden sand and several crucible fragments lend support to this idea.

These same crucible fragments, combined

**Figure 3: Artifact collage showing pewter tops from case bottles (top left), ceramic bottle (top right), base of clear glass phial (bottom left) and glassware rim or base (bottom right) associated with the occupation of Feature 217**



attempts or ‘trials’ to assess their viability. These by-products include many hundreds of pieces of partially-melted, sandy, greenish, glassy material; as well as waste products resembling clinker, often associated with the burning of coal as a fuel. Bearing in mind that this building’s associated midden deposits, particularly along its eastern side, have not been fully excavated, several possibilities present themselves, two of which I will briefly discuss.

One involves attempts at making glass. Historical records state that glassmaking was among the industries to be attempted at Newfoundland’s first

with the presence of ceramic bottles, several pewter-topped case bottles and caps, clear and green glass phials, as well as fragments of other specialized glassware, give rise to another possibility: that this structure may have served as an alchemist’s laboratory (Figure 3). The multiple hearth features, various waste products, and the range of (potential) chemical equipment may suggest that this was once the laboratory of an alchemist. Admittedly, this interpretation may change or be strengthened following the 2020 field season.

Regardless of the building’s original function(s), the duration of occupation was certainly short lived, as evidenced by a small but tightly-datable collection of clay tobacco pipes manufactured in London, Bristol and Devon (Figure 4). Other datable objects include a Charles I bale seal fragment (Figure 5). Built sometime in the 1620s and occupied into the 1630s, it is possible that this structure’s demise was ultimately associated with the end products (or lack thereof) produced within; and/or that its demolition was the result of the extensive re-organization and re-fortification of Ferryland by Sir David Kirke starting in 1638.

It was the Kirke family, including Lady Sara and her sons George, David (II), Phillip and Jarvis, who found ways to make the Ferryland colony profit-



Figure 4: Assortment of clay pipe bowls and makers' marks from Feature 217

able, in part thanks to the existing infrastructure built and paid for by Sir George Calvert, the first Lord Baltimore. Evidence for this prosperity has been amply demonstrated in the archaeological record. The 2019 excavations in Area B provide further confirmation in the form of a domestic midden believed to be associated with members of the Kirke family (Gaulton and Hawkins 2013, 2014; Gaulton and Casimiro 2015). Prodigious amounts of decorated tin-glazed earthenware, sgraffito-decorated slipware, relief-moulded clay tobacco pipes, brass upholstery tacks, and items of personal adornment are among the notable finds from 2019. Below this midden is the remains of Ferryland's early cobblestone street, first envisioned by Governor Wynne in 1622 "that the whole may be made a prettie streete" and believed to have been completed before George Calvert's visit in 1627 (Wynne 1622, in Whitbourne 1623).

#### Eileen Bethune's Research

Ferryland's main street stands out in comparison to other contemporaneous examples in the New World, as it is among the earliest evidence for a paved road in colonial North America. Archaeology demonstrates that Ferryland's cobblestone street runs the entire length of the original fortified settlement, some 121m (400ft) long by 4m (13ft) wide (Gaulton and Tuck 2003:190; Gaulton 2006:33; Miller 2013). It

contains an estimated 75,000 stones (Gaulton 2006:51).

Following the completion of the laboratory component of my MA research, I conducted a reconnaissance survey of the shorelines and beaches within proximity of the Pool searching for suitable raw material sources (sand and cobblestones) used in the construction of Ferryland's paved street. In conjunction with the survey I excavated a single 50cm by 50cm test pit at each end (east and west; Area F and B respectively) of Ferryland's cobblestone street. The purpose of these test pits was to determine: 1) how the

street was constructed, including the thickness and grain size of the underlying sand bedding and how the cobblestones were set into this bedding; 2) if there are any differences between the construction methods and materials used on either side of this 121metre long paved feature (Figure 6).

The results demonstrate that the stones used on the east end of the settlement are different than the stones used on the west end, and come from different beaches. The former was constructed with stones from the eastern shoreline nearest to that end of the settlement. These stones were tightly packed, with the majority of each stone embedded in the sand and placed so that there was a flat surface to walk up-

Figure 5: Charles I lead bale seal fragment







Figure 6: Test pit below Feature 56 (cobblestone street), Area F

on. By comparison, the stones from the west end were less tightly packed and less of each stone was set into the sand bedding. Additionally, the stones on this end of the street were rounder and harder to walk on, originating from a different but nearby beach to the west. Based on the sand samples I collected, this western beach alone supplied the sand bedding for the entire street. Differences in the construction on

either end of the street, combined with the artifact analysis, led to an initial theory that the eastern end of the street was paved first as it was the centre of domestic activity, while sometime later paving continued westward towards the other end of the settlement where the forge (and possibly other structures) were located.

The theory was further tested by excavating below the sand bedding under the street in an effort to find evidence of earlier cultural deposits. However, the test pits on the east and west ends of the street failed to reveal earlier 17<sup>th</sup>-century material. The absence of slag from the nearby forge in the western test pit is also significant as the forge was one of the earliest Calvert-era buildings constructed at Ferryland, completed in early summer of 1622 (Wynne 1622, in Whitbourne 1623). Thus, it appears that there was no appreciable length of time between the construction and operation of the forge and the laying of the cobblestone street. The lack of artifacts under the cobblestones at the western end of the street therefore supports an alternative theory: that the paved

street was an early construction completed in its entirety within a relatively short time period.

In addition to my independent fieldwork, excavations of the overlying 17th-century midden in Area B exposed an additional 3 metres of the southern edge of the street towards the western end of the colony (Figure 7). The southern edge of the pavement clearly shows evidence of a continuous wooden





**Figure 7: Area B excavation showing newly-exposed section of Feature 56 (foreground) and previously-excavated segments of the same (background).**

curb set so as to encase and contain the sand bedding (and subsequent cobblestones). The curb itself was supported by a series of posts, 8cm in diameter set 1.21m (4ft) apart, as revealed by several preserved post molds.

Based on the above evidence and the previous excavation of the cobblestone street in the 1990s, a sequence of construction for the street can be suggested. Starting with the placement of a wooden curb, set 4m (13ft) apart, the addition of 17.8cm (7in) of sand bedding was added between the curbs along the entire length of the street. From there, a possible two or more ‘stone layers’ — a profession involving the laying of stones for a building or any form of paving — worked to pave the street using stones acquired on both shorelines in proximity to each end of the street, thus explaining the difference in construction style and raw material identified at the eastern and western portions of the street.

#### **Acknowledgments**

We would like to thank the PAO and the JR Smallwood Foundation for generously providing funding to facilitate Eileen Bethune’s MA research. James Williamson (PhD Candidate, MUN) and Peter Whitridge (Professor and Head, Department of Archaeology, MUN) also deserve thanks for photographing Feature 217 using a drone, as seen in Figure 1. Williamson later produced a detailed map using the same imagery. Finally, a big thanks to volunteer crew-member Melissa McDonald who spent several weeks assisting in the field and laboratory.

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