

## PIONEERS OF NEW BRUNSWICK ARCHAEOLOGY III: LORING WOART BAILEY

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Loring Woart Bailey was born at West Point, Virginia, in 1839. He came from an academic and professional background — his father, Jacob Whitman Bailey, taught chemistry at the Military Academy at West Point. Loring Bailey followed his father into a similar career path.

Bailey attended private schools in Maryland and Rhode Island. He graduated with a Bachelor of Arts degree from Harvard University, in 1859, and then worked at Harvard for two years as a proctor and as a chemistry professor's assistant. While at Harvard, he was taught by some renowned academics of the time, including the geologist Louis Agassiz, the biologist Asa Grey and the poet Henry Wadsworth Longfellow.

In 1861, Bailey was hired into the Chair of Chemistry and Natural History at the University of New Brunswick, when the post was left vacant by the death of James Robb. At that time, William Brydone Jack, President of UNB, was reorganizing the school on a non-sectarian basis. Loring Bailey was a professor at UNB for 47 years, retiring in 1907. From 1861 to 1900, he was the sole professor of natural science at UNB. He remained associated with the university, and active in scientific studies, until his death in 1925.

As a consequence of being hired at UNB, Bailey was safely out of the United States during the American Civil War. Within two years of his arrival in Fredericton, he married Laurestine Maria D'Avray, a daughter of J. Marshall D'Avray (who taught languages at UNB during the mid-nineteenth century). Despite childhood injuries that left him with a lame leg, Bailey led an energetic and active life. His natural science fieldwork took him to every part of New Brunswick and to many other places in Canada and the United States.

Bailey was granted a Master of Arts degree by Harvard University in 1862, and a Doctor of Philosophy degree by UNB in 1873. He conducted research in conjunction with the Geological Survey of Canada and the Biological Board of Canada, and became a Charter Member of the Royal Society of Canada in 1882. Subsequently, he was awarded an honorary Doctor of Laws degree by Dalhousie University in 1896, in recognition of his career achievements. One of Bailey's students, William F. Ganong, named Mount Bailey, in the Geologists Range, for him.

Loring Bailey is best known in scientific circles for his contributions to biology and geology. In his biography of his father, Joseph W. Bailey listed more than 100 scientific papers and reports on these subjects authored by Loring Bailey. He also listed about a dozen publications on other topics. It is to some of the latter I direct attention here. As is the case for other nineteenth-century pioneers of New Brunswick archaeology, Bailey's archaeological work is merely a footnote to a long career largely devoted to other pursuits.

Loring Bailey wrote only two publications focussed specifically on archaeological topics. The first was a brief paper published in 1883, in the first volume of the journal *Science*.<sup>1</sup> Bailey's paper contained the first published description of Native pottery from New Brunswick; apparently, the fact that Native people made ceramics in New Brunswick prior to European contact had not been recognised until just a year or so before the paper was written. Bailey described ceramic artifacts found in the thoroughfare between Maquapit Lake and Grand Lake. He also mentioned the discovery of an early historic period, copper-kettle burial at Indian Point on the Grand Lake end of the thoroughfare. This paper did not include illustrations.

Bailey's second paper on archaeology was published in 1887 in the sixth volume of the *Bulletin of the Natural History Society of New Brunswick*. Here, Bailey presented brief

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<sup>1</sup> *Science* is a publication of the American Association for the Advancement of Science, and has become a leading natural science journal.

descriptions of Native artifacts from all over New Brunswick, but concentrated on artifacts from the interior of the province, especially from the lower Saint John River valley. In so doing, he set the precedent of treating the coastal and interior archaeological records of the province as separate fields of inquiry, a tendency that persists to the present. The paper is almost completely descriptive, and — except for an off-hand comment on the similarities between New Brunswick's and Denmark's coastal middens, and a report of Major (John Wesley) Powell's comments on the carved pipe bowl referred to below<sup>2</sup> — lacks any comparative framework. However, Bailey understood the importance of comparative work, and attempted to lay the ground work for others to compare New Brunswick artifacts with those from elsewhere..

In this paper, Bailey made the first attempt at a systematic classification of New Brunswick archaeological artifacts. His system was based on the materials from which the artifacts were made, distinguishing stone, organic (bone, shell, etc.), ceramic (clay and earthenware) artifacts, and food refuse. In addition, he briefly mentioned human skeletal remains and archaeological site locations as separate lines of evidence about the prehistoric past. The paper included three plates illustrating 78 stone tools, 14 ceramic sherds, a group of about 40 shell beads, and one carved smoking-pipe bowl.

The stone tools include projectile points, bifaces, axes and celts, gouges, plummets and perforated stones. Most notable among these are: i) several whole or fragmentary fully channelled gouges (now recognised as dating to the Middle–Late Archaic period, ca. 5000 years ago or earlier); ii) several very large ground-stone artifacts (45–55 cm in length) that are among the largest of their kind ever reported from New Brunswick; and iii) several fragmentary ground-slate bayonets from the thoroughfare area at Grand Lake. The bayonet fragments show that Late Archaic burials were eroding from the Cow Point cemetery a century before David Sanger directed the National Museum of Canada's salvage excavation of that site. Bailey described these artifacts as follows:

Among the articles found at Maquapit Thoroughfare, near Indian Point, Grand Lake, are several which are interesting as exhibiting attempts at surface ornamentation. In each case these objects are of a narrow lanceolate form, tapering at the one end to a point and hence bearing some resemblance to spear or lance-heads; but in each case the flattened sides are markedly divided into three well-defined parallel zones, which run the whole length of the article and are inclined to each other at a considerable angle, while (on one side only) the central, or all three of these zones, is conspicuously marked and ornamented with incised lines. When central, these lines run obliquely down from right to left at an angle of 45°, and are remarkable for their regularity, and in one instance for their number and fineness; but when found on all three faces, those on the sides are uniformly oblique (downward from right to left), while those of the middle form a more complex pattern, inclining right and left alternatively in zig-zag fashion. In two instances the material composing these ornaments is a fine black slate, in another a light coloured and apparently magnesian slate. The fineness of the incisions points to the use of sharply pointed instruments and a considerable degree of skill in their manufacture. (Bailey 1887:10)

This description is consistent with some of the bayonets illustrated by Sanger (1973:185–198).

The ceramic sherds include some of those described in the earlier paper. Some of these are decorated with the rocker-dentate motif used during the Middle Woodland period (2200–1500 BP). The shell beads were found in association with a Native burial on the Tobique River. Bailey

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<sup>2</sup> Powell was director of the U.S Geological Survey and head of the U.S. Bureau of Ethnology.

believed they were made locally from freshwater mussel shells. The carved pipe bowl, exhibits a human face positioned to look toward the smoker. It was given to Bailey's son, Joseph, by a person who reported it as being found below Aroostook Falls.

Bailey apparently planned a follow-up to his 1887 paper, but this was never completed. However, some of his geological publications contain important contributions to archaeological research. Examples include Bailey's (1864; Bailey, Matthew and Ells 1873) geological description of the Belyeas Cove area, the location of the Washademoak Lake Chert Source (Black and Wilson 1999; Gilbert, Gallant and Black 2006). Following are excerpts from Bailey's descriptions of this locale:

About the mouth of Washademoak Lake small ledges of Carboniferous red conglomerate appear...

Perhaps the most interesting view of the rocks in this vicinity is that furnished by the shore of the Washademoak Lake, between Belyea's Cove and Craft's Cove. The western side of Belyea's Cove shows only ledges of laminated grey sandstones, which are a portion of the Middle Carboniferous formation, and are nearly horizontal, though with much false bedding. Similar beds also crown the hills on both sides of the cove, but beneath them on the eastern side other beds are exposed which, both in color and lithological characters, resemble those of the Lower Carboniferous formation, viz.: bright red shales with thin beds of limestone, the latter with layers and nodules of bright red chalcedony. (Bailey et al. 1873:191–192).

*Jasper, Chalcedony, &c.*) ...On the shore of Washademoak Lake, between Belyea's and Taft's Coves,<sup>3</sup> limestones associated with red shales of the Lower Carboniferous formation have been described as containing nodules and layers) and at one point a bed two feet thick) of chalcedonic quartz. Much of this rock is very beautiful, its color varying from cream color, through pink, to a rich red, these shades being sometimes distributed in bands. (Bailey et al. 1873:229).

It is largely because Bailey did not mention chert in association with the igneous and sedimentary rocks at Currie Mountain (Bailey 1904, 1910), that I believe the chert at Currie Mountain was not exposed naturally and was thus not available for Native people to use as toolstone in Pre-contact times.<sup>4</sup> Bailey wrote these papers long after his investigation of the geology of Belyeas Cove on Washademoak Lake, and, had he observed chert similar to the Belyeas Cove material at Currie Mountain, he would surely have mentioned it.

The artifacts described by Bailey in 1887, and many others, became part of the UNB museum collections, which were begun by James Robb. Bailey expanded these to fill four rooms in the Old Arts Building (now Sir Howard Douglas Hall). Apparently, the museum was a great source of pride and joy to Bailey, and, according to Alfred G. Bailey (Loring Bailey's grandson, and professor of history at UNB from 1938–1970), during the late nineteenth century the UNB museum was one of the finest small museums in Canada. Loring Bailey wrote an article published in *The Brunswickan* in 1923 describing the museum collections. He devoted only one paragraph to archaeological artifacts in the museum, noting that most of the New Brunswick Native artifacts came from the Maquapit Lake–Grand Lake thoroughfare. He also mentioned that the collections included artifacts from the southwestern United States, and from the Pacific

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<sup>3</sup> "Taft's Cove" is clearly a typographic error. Bailey et al. (1873:191) identify this place as Craft's Cove. This name, modernized as Crafts Cove, continues to be used on topographic maps.

<sup>4</sup> The chert at Currie Mountain is currently exposed in a quarry adjacent to Carlisle Road.

Islands, and the hand of an Egyptian mummy from Thebes.

Many of these artifacts are now part of the UNB Archives kept in the Harriet Irving Library. The story of these artifacts, subsequent to Loring Bailey's death, is an interesting one. However, as I intend to make this the subject of a subsequent essay, I will say nothing further about them here.

There is only one reference to archaeology in Joseph Bailey's biography of Loring Bailey; it is a poignant passage, well worth quoting by way of a conclusion. Here is Joseph Bailey's description of "archaeologizing" with his father, in the vicinity of Cow Point and Indian Point:

Along the deep still thoroughfare between Grand and Maquapit lakes, as well as on the shores of French Lake, careful searches were made for relics of prehistoric man. The boys [referring to Loring Bailey's sons and their friends] stalked about bare-legged on the muddy banks and among the tangled alders, working down with their feet until some hard substance was touched. This they grasped and drew up with their toes. As the region is one of alluvial silt, with no stones, practically every article they brought to light proved to be a stone implement, usually a flint arrow-head, axe-head, or decorated bit of broken pottery. (J.W. Bailey 1925:77–78)

Such was the beginning of professional archaeological research in the St. John River valley.

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### **Bibliography:**

- Anonymous** 1925. In Memoriam: Dr. Loring Woart Bailey. *The Brunswickan* 44(3).
- Bailey, J.W.** 1925. *Loring Woart Bailey. The Story of a Man of Science*. Saint John, N.B.: J&A McMillan, Ltd.
- Bailey, L.W.** 1883. Indian relics from New Brunswick. *Science* 1:245–246.
- Bailey, L.W.** 1887. On the relics of the Stone Age in New Brunswick. *Bulletin of the Natural History Society of New Brunswick* 6:1–16.
- Bailey, L.W.** 1904. The volcanic rocks of New Brunswick. *Transactions of the Royal Society of Canada*, Section IV, pp. 123–138
- Bailey, L.W.** 1910. The history of Curries Mountain—an old New Brunswick volcano. *Bulletin of the New Brunswick Natural History Society* 6(28):189–197.
- Bailey, L.W.** 1923. The University Museum. *The Brunswickan* Jan-Feb/23.
- Bailey, L.W., G.F. Matthew and R.W. Eells** 1873. Report on the Carboniferous System of New Brunswick in the counties of Queens, Sunbury, and a portion of York. *Geological Survey of Canada, Reports of Progress 1872–73*:180–230.
- Black, D.W., and L.A. Wilson** 1999. The Washademoak Lake Chert Source
- Gilbert, C.D., M.Gallant and D.W. Black** 2006. Distinguishing Carboniferous- from Mesozoic-aged Chert Toolstones in the Canadian Maritimes. Available on-line: <http://www.unbf.ca/arts/anthropology/documents/DistinguishingCarboniferousfromMesozoicCherttoolstones.pdf>
- Sanger, D.** 1973. *Cow Point: An Archaic Cemetery in New Brunswick*. National Museum of Man, Mercury Series, Paper #12. Ottawa: National Museums of Canada.



Figure 1: Portrait of L.W. Bailey (from Bailey 1925).



Figure 2: Washademoak Chert *in situ* at the Bailey outcrop, Washademoak lake Chert Source, in 2003 (DWB photo).