

Contents lists available at ScienceDirect

Journal of Archaeological Science: Reports

journal homepage: www.elsevier.com/locate/jasrep

### Archaeological SCIENCE: Reports

# A geochemical analysis of 18th-century Inuit communal house floors in northern Labrador



#### Andréanne Couture <sup>a,\*</sup>, Najat Bhiry <sup>a</sup>, Yves Monette <sup>b</sup>, James Woollett <sup>c</sup>

<sup>a</sup> Département de géographie and Centre d'études nordiques, Pavillon Abitibi-Price, 2405 Rue de la Terrasse, Université Laval, Québec G1V 0A6, Canada

<sup>b</sup> Département d'anthropologie, Université de Montréal, Pavillon Lionel-Groutx, C. P. 6128, Succursale Centre-ville, Montréal, Québec H3C 3/7, Canada

<sup>c</sup> Département des sciences historiques and Centre d'études Nordiques, Pavillon Charles-De Koninck, 1030 Avenue des Sciences-Humaines, Université Laval, Québec G1V 0A6, Canada

#### ARTICLE INFO

Article history: Received 3 June 2015 Received in revised form 19 January 2016 Accepted 19 January 2016 Available online 5 February 2016

Keywords: Geoarchaeology Inuit Labrador household geochemistry ICP-AES contact period activity areas

#### ABSTRACT

This paper reports on a multidisciplinary study carried out on three 18th-century Inuit communal sod houses at two archeological sites in Labrador, northern Canada (Houses 1 and 2 at Oakes Bay 1 and House 7 at Uivak Point 1). Geochemical analyzes were used in order to determine if the occupational layer of those dwellings had been impacted by human occupation. They revealed multiple geochemical indicators of human activities within the archeological deposits. For example, enriched concentrations of P<sub>org</sub>, CaO, Sr, Ba and Na<sub>2</sub>O, which could have been generated by cooking and lamp maintenance activities, were found in floor deposits where burnt and fresh bone fragments had been observed. The entrance tunnel was also rich in geochemical indicators of food waste (notably P<sub>org</sub>, CaO and Sr) and lamp maintenance (S and Zn). However, the spatial analysis of the geochemical results did not identify specific activity areas within House 2 and House 7. In fact, the statistical analysis revealed a scattered pattern of the anthropogenic residues within all areas of the houses. The effects of depositional and post-depositional processes, which could have been amplified by the fact that the houses were unoccupied and exposed to the elements several months per year, could have generated this pattern. The anthropogenic residues or by cleaning events.

© 2016 Elsevier Ltd. All rights reserved.

#### 1. Introduction

Geoarchaeology uses the methods and concepts of Earth sciences such as soil sciences, chrono-stratigraphy, sedimentology, geochemistry and geomorphology to study archeological deposits (Waters, 1992). It has proved fruitful to document the spatial organization of activity areas at a site or within dwellings in many recent case studies around the world (Entwistle et al., 2000a; Homsey and Capo, 2006; Middleton, 2004; Terry et al., 2004; Vizcaíno and Cañabate, 1999). However, rather few archeologists have applied geoarcheology to the study of Paleoeskimo or Neoeskimo settlements and habitations in the Eastern Arctic (Aubé-Michaud, 2012; Butler, 2008; Derry et al., 1999; Todisco and Bhiry, 2008). With this in mind, we sought to explore the possibilities offered by geochemical approaches to document cultural activities occurring within a type of Inuit house particular to Labrador (Canada) and Greenland: the semi-subterranean communal winter house (Gulløv, 1997; Woollett, 2003).

\* Corresponding author. *E-mail address:* andreanne.couture@protonmail.com (A. Couture).

Many archeologists working in Labrador and Greenland have studied the Inuit communal house and have documented the ways in which it differed from the smaller traditional Thule winter house (Bird, 1945; Gulløv, 1997; Jordan and Kaplan, 1980; Jordan, 1978; Kaplan, 1983; Kaplan and Woollett, 2000; Murphy, 2012; Richling, 1993; Schledermann, 1971, 1976; Taylor, 1977; Taylor and Taylor, 1977; Whitridge, 1999; Woollett, 2003, 2007, 2010). From the architectural perspective, these two types of dwellings shared very similar elements and differed primarily in size and complexity. They were constructed of locally available stone, peat, sediment, whale bone and wood and had a single point of access, an entrance tunnel, which ended with a cold trap excavated below the threshold of the house. The internal constituents of both houses were also similar: a completely or partially paved floor, a sleeping platform along the back or side walls of the house, one or more lampstands and a roof of animal skins or peat blocks supported by wood or whale bone posts and beams (Dawson, 2001, 2002; Dawson et al., 2007; Fitzhugh et al., 1994; Habu and Savelle, 1994; Kaplan, 1983; Patton and Savelle, 2006; Rankin, 2009; Woollett, 2003). The number of occupants for each type of house also differed greatly, from about five people for the traditional Thule house to an average of 19 individuals for the communal house (Taylor, 1974). Consequently, one of the most striking differences was the much larger size of the communal house. This type of dwelling contained a number of sleeping platforms and lampstands to accommodate the multiple families that were occupying it. Substantial storage spaces have also been noted in historical, archeological and ethnographic records (Jordan, 1978; Kaplan, 1983; Whitridge, 2008; Woollett, 2003). Nevertheless, many aspects of this type of habitation still remain unknown and the reasons underlying its adoption by the Labrador Inuit in the late 17th century are still being debated (Jordan, 1978; Kaplan and Woollett, 2000; Rankin, 2009; Richling, 1993; Schledermann, 1976).

In this study, our goal was to examine the organization of space and activities in communal houses by performing geochemical analyzes of archeological deposits sampled within three houses. Even though this research also included micromorphological and sedimentological analyzes (Couture, 2014), we will only be discussing the results of our geochemical analysis in this paper. Paleoecological analyzes have also been undertaken inside and outside of structures and have been published elsewhere (Roy et al., 2012; Roy, 2010). Because household archeology using geochemistry has not been applied to many hunter-gatherer archeological contexts in the Arctic (Butler, 2008; Knudson and Frink, 2010; Knudson et al., 2004), we also sought to determine if this approach would yield results as conclusive for relatively short-term or episodic occupations as it had been the case in research studying long term agrarian and historical settlements (Entwistle et al., 1998; King, 2008; Terry et al., 2004).

#### 2. Study sites

The two sites selected for this research project are located in the northern part of the Labrador Coast (Fig. 1). The region lies on Precambrian granite-gneiss rocks that underwent significant erosion during the Late Pleistocene glaciations (Woodward-Clyde Consultants, 1980). It is composed of numerous glacially eroded hills and depressions trending west to east. Several islands and bays lie along the coast of Labrador.

The Labrador sector of the Laurentide Ice Sheet began its retreat around  $8500 \pm 200^{14}$ C yr BP (9500 yr cal. BP) which was followed by the transgression of the Labrador Sea onto the coastline to an altitude of up to about 70 m (Clark and Fitzhugh, 1990; Vincent, 1989). The post-glacial isostatic rebound raised part of the coastline above sea level, including the locations of the two archeological sites targeted by our study (Fig. 1). The study region is located within a zone of transition between and Low Arctic and Subarctic climate zones and lies within the distribution of discontinuous and scattered permafrost (Woodward-Clyde Consultants, 1980).

Oakes Bay 1 is located in the approaches to Nain Bay and is composed of seven sod house ruins (Fig. 2a). This site was occupied from the middle of the 17th century to 1771–72, if not somewhat later (Taylor, 1974; Woollett, 2003). The second site, Uivak Point 1, was occupied from the end of the 17th century to the early 19th century and is composed of nine discrete communal house ruins (Fig. 2d). Both sites



Fig. 1. Map of Labrador and locations of study sites.

Download English Version:

## https://daneshyari.com/en/article/10499976

Download Persian Version:

https://daneshyari.com/article/10499976

Daneshyari.com