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Putting dental calculus under the microscope

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Curriculum Vitae

Bjørn Peare Bartholdy, born in the Great White North in a time where we still thought Compact Discs and disposable cameras were pretty neat. I obtained my BSc (honours) in archaeology with a concentration in physical anthropology at the University of Calgary in 2015. My thesis was supervised by Dr. Mary Anne Katzenberg and explored the application of micro-CT in archaeological examination of osteoarthritis lesions in the vertebrae of un-provenanced skeletal remains. I went on to get my MSc in Osteoarchaeology at Leiden University in 2017. Here, my thesis research was supervised by Dr. Andrea Waters-Rist, where I looked for relationships between enamel properties and dental disease in the deciduous dentition, using micro-CT. The materials used for this research were from a 19th century Dutch population.

I started my PhD position in 2017, under the supervision of Dr. Amanda Henry. The main focus of the research involved developing and validating a protocol to develop a model dental calculus system, which could be used to explore dietary research questions from an archaeological perspective. The protocol was validated using Fourier Transform Infrared (FTIR) spectroscopy to assess the mineral composition, and metagenomic analysis to characterise the microbiome. The protocol was then applied to explore questions related to the incorporation and retention of dietary starches in dental calculus.

Alongside my PhD research, I participated in a variety of activities both related

and completely unrelated to my dissertation research. I helped develop and co-instructed the Quantitative Methods in Archaeology course for two consecutive years. I co-supervised multiple Master's students in the MSc Osteoarchaeology specialisation. I also taught a number of guest lectures on dental calculus, dental diseases, statistics, and open science. I was a teaching assistant in the Osteoarchaeology course for third year Bachelor's. I received my Data Carpentry teaching certification and co-instructed multiple Data Carpentry workshops teaching the R Statistical Programming language to social scientists, co-hosted by Leiden University, TU Delft, Erasmus University Rotterdam, and Vrije Universiteit Amsterdam. In 2022 I started as a Data Steward at TU Delft. I've done lots of other stuff, too, which you can find in the CV I can actually keep updated.