

Revealing a dead man's story through his bones

May 8 2015



Ian Coulthard and Treena Swanston

Little is known about the Royal Naval Hospital's cemetery in Antigua, and with little but the bones themselves to go on, researchers turn to synchrotron imaging to uncover the histories of the men buried there.

The Naval Hospital served naval personnel, enslaved labourers, and the general public from 1793-1822. The region was an important outpost for the British in the West Indies, and Antigua itself was an important military site at the time. The cemetery was moved due to modern construction, making some [human remains](#) available for study.

Metals in the bones tell a story as well. For example, strontium concentrations can tell researchers a great deal about diet.

One of the individuals at the site, a young man in his 20s, was found with unusually high [mercury levels](#). We know that [mercury](#) was often used for medical purposes, but it may have been simply taken up by the bones after burial. To find out, a multi-institutional research team that included bioarchaeologists from the University of Saskatchewan and Lakehead University used synchrotron X-ray fluorescence imaging to determine the distribution and type of mercury in the [bone](#).

Because bone remodels as it grows, it provides a clear record of elements taken up during life, and the man's bone samples show clear evidence that the mercury had been ingested during his life, and he may have been poisoned with mercury. At the time, mercury had also been used to treat syphilis-induced rashes and yellow fever.

The team continues to collect more information about the site, combining the search for documentation and synchrotron-enabled bone studies for a detailed look at colonial life in the West Indies.

More information: Swanston, T., Varney, T., Coulthard, I., George, G. N., Pickering, I. J., Murphy, R., & Cooper, D. M. (2015).

Synchrotron X-ray fluorescence imaging evidence of biogenic mercury identified in a burial in colonial Antigua. *Journal of Archaeological Science*, 58, 26-30. [DOI: 10.1016/j.jas.2015.03.006](https://doi.org/10.1016/j.jas.2015.03.006)

Provided by Canadian Light Source

Citation: Revealing a dead man's story through his bones (2015, May 8) retrieved 3 May 2024 from <https://phys.org/news/2015-05-revealing-dead-story-bones.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.