

Advances in Stratigraphy and Geochronology

Virtual Seminar Series of the Stratigraphy and Chronology Commission (SACCOM) of INQUA

Thursdays at 9 am USA EST, 2 pm London, 3 pm Paris, and 10 pm Beijing time.

The second talk of the weekly series is on April 29,
given by:

Sarah Finkelstein (University of Toronto, Canada)

"Biostratigraphy and chronology of sub-till organic-bearing deposits in the Hudson Bay Lowlands, Canada"



Sarah Finkelstein is an Associate Professor in the Department of Earth Sciences at the University of Toronto. She is a paleoecologist and paleoclimatologist with research interests in Holocene and Late Pleistocene wetland development, carbon cycling in wetlands, palynology and other microfossil proxies for long-term environmental changes, and the application of paleoecological knowledge to climate change mitigation and adaptation. Sarah's research has focused primarily on ecosystems of Arctic and Boreal Canada, most recently the extensive peatlands of the Hudson and James Bay Lowlands.

Abstract: The Hudson Bay Lowlands is a low-lying, low-relief landscape situated between the uplands of the Canadian Shield and Hudson and James Bays, on the traditional territory of the Mushkegowuk Cree in the northern parts of the Canadian provinces of Manitoba, Ontario and Quebec. The physiographic setting has resulted in the rare preservation of Pleistocene-aged glacial and interglacial sediments, despite repeated episodes of ice advance and retreat and the proximity to the centre of the Laurentide Ice Sheet. A series of large river systems drain through the Lowlands and a complex series of Quaternary-aged glacial and non-glacial units are exposed in these valleys. These sequences preserve glacial deposits from multiple ice advances, as well as organic deposits of Pleistocene age. Pollen and macrofossil from organic strata confirm local presence of forested boreal peatlands, and quantitative paleoclimate reconstructions from a series of sites in the central and southern parts of the region indicate between-site variability in mean annual temperature and total precipitation, suggesting multiple non-glacial intervals. The paleoecological data combined with both finite and infinite radiocarbon ages, and OSL ages, suggest the possibility of ice-free conditions during the last interglacial as well as during the MIS3 interstadial, which may help to resolve long-standing questions around MIS3 sea level.

For more details of the full seminar series please go to the SACCOM webpage at: <https://www.inqua.org/commissions/saccom/ifg>. Please see the Zoom link below.

ZOOM LINK:

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Overseen by Lewis Owen on behalf of SACCOM