

ecosystem. The fluvial omission event resulted in the creation and preservation of a variety of unbranched, cross-cutting, irregular, sinuous and spiraling interface traces (repichnia and pascichnia), which commonly demonstrate terminal burrowing (cubichnia). Traces were examined on an exposed sand bank between Ross and Jewett islands, and a molluscan fauna, the apparent progenitors of the structures, was sampled. A similar taphofauna, without associated traces, was also observed downstream on the river bank.

The recent trace suite is attributable to the Scoyenia ichnofacies and includes examples of traces with morphologies comparable to the ichnogenera *Lockeia*, *Curvolithus*, *Spirophycus* and *Gordia*. The traces can be directly attributed to the associated molluscan assemblage comprising sphaeriid and unionid bivalves and unidentified gastropods, examples of which are 'frozen' at the end of the traces or in shallow terminal burrows. Evidence of vertebrate activity is also apparent, with avifauna indicated by walking (gull and raven), probing (gull) and excavation (raven) traces as well as faecal material. Mammal tracks include mink and cow.

The mixed-load, braided, alluvial channel depositional system is characterized by frequently shifting sand banks, which would tend to preclude preservation except in the instance of channel abandonment. The epirelief nature of the majority of traces further limits the preservation potential of the assemblage and the relatively high energy of the river system creates a harsh taphonomic regime for molluscan preservation which is characterized by dissolution of aragonite in the case of the Unionacea.

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### A novel contemporary fluvial ichnofauna

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A period of low water level (1 m below average) in the Saint John River provided an opportunity to study sediment traces associated with an environmentally stressed fluvial freshwater