

Use of Mesocosms to Study the Motility and Recruitment of *Corophium volutator* into Invertebrate Assemblages

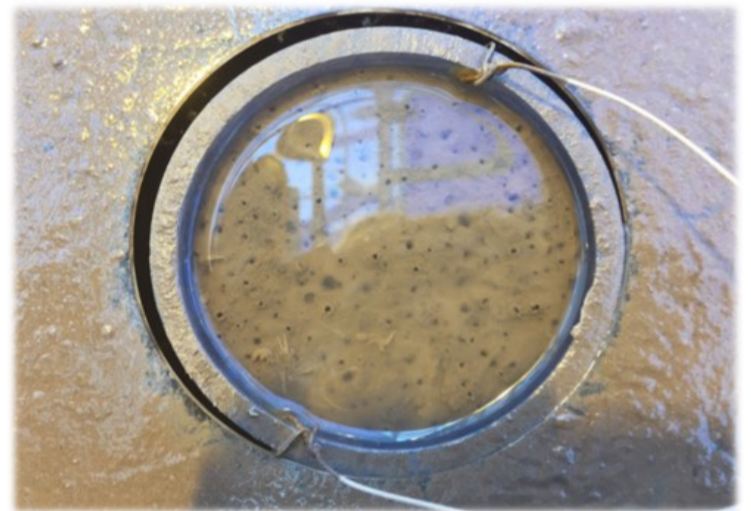
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The Minas Basin is situated in the Bay of Fundy and supports a high abundance of *Corophium volutator*. This species is of particular interest because they are ecosystem engineers that alter the surrounding environment by constructing U-shaped burrows in soft sediment. This has positive effects on sediment stability through compacting surrounding sediment and particles. In addition to this, *Corophium* are an important food source for shore birds that arrive to the tidal flats in July-August, and also for ground feeding fishes.



The objective of our experiment is to determine if adult *Corophium volutator* recruit into established communities on the tidal flats based on sediment characteristics or based on the presence of other species of invertebrates. The samples were collected from three locations within the Minas Basin mudflats; Evangeline, Avonport, and Kingsport.

Adult *Corophium* were released into the mesocosm, which contained sediment cores with or without invertebrates. After two weeks, the cores were removed from the mesocosm. Following this, the samples were sieved, fixed in a fixative, and stained to give better visualization. We are now in the process of enumerating and sexing *Corophium*, as well as identifying other major groups of macrofauna.



Collecting sediment cores



The Process

Putting pots in the mesocosm



Sieving pots after two weeks in the mesocosm

