Use of Mesocosms to Study the Influence of Conspecifics on Juvenile *Corophium volutator* Recruitment

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Corophium volutator is an abundant, burrow-dwelling amphipod found in the Minas Basin, Bay of Fundy. Understanding how *Corophium* recruit into tidal flat communities is important as they are an important food source for shore birds and demersal (ground-feeding) fish. *Corophium volutator* are sometimes referred to as "ecosystem engineers" as they impact tidal flat structure when building their burrows.

Objective

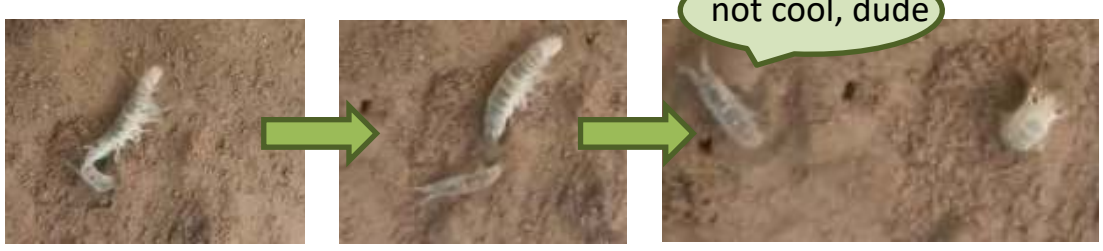
The objective of this experiment is to determine if recruitment of juvenile *C. volutator* into tidal flat communities is influenced by conspecifics- do other *Corophium* (adult males, adult females and other juveniles) influence where new recruits build their burrows?

The Process

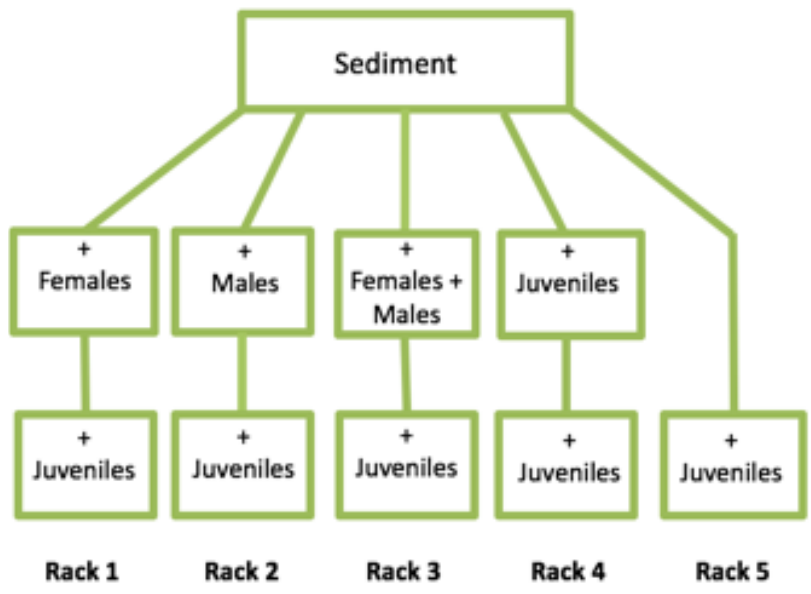
Sediment samples and *C. volutator* were collected from Avonport tidal flats. Adults and juveniles were to added cores of sediment in racks placed in mesocosms and exposed to ambient tidal cycles. After a one week acclimatization period, 1000 juveniles will be added to each rack. After two weeks, the *Corophium* will be examined to determine if recruitment of juveniles was impacted by the presence of adults, males, or other juveniles in the sediment.

What we have seen so far:

- Adult males desperately trying to escape their enclosure, possibly to find females
- Adult females pulling smaller females out of their burrows with their antennae and claiming the burrow as their own



Experimental Design



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