

## **Trail following as a mating strategy of mangrove littorinids**

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Snails secrete pedal mucus when they crawl over the substratum. This energy consuming product persists as a mucus trail and has certain beneficial functions for the snails. Some species exhibit self or conspecific trail following behaviour which may aid food discovery, formation of aggregations, homing, etc. *Littoraria* are snails that graze on mangrove trees in tropical regions. In the mating season, male snails search for females to form mating pairs. However, the cues which lead to successful encounters between pairs within the dense tree canopies remain a mystery. Trail following could be one of the possible mechanisms driving mating behaviour in these snails. In this study, trail following behaviour in relation to mating in two dominant *Littoraria* species in Hong Kong mangroves, *Littoraria melanostoma* and *L. arduiniana* will be investigated. In addition to the behavioural mechanisms, the chemical cues in the snail mucus will also be investigated using proteomic techniques. This study will contribute to our understanding of the interplay between behavioural and biochemical factors on the reproductive fitness of mangrove littorinids.