

# PATTERNS OF VARIATION IN MANGROVE LITTORINID MOLLUSCS ON PHUKET ISLAND

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## ABSTRACT

Five species of *Littoraria* commonly live on mangrove trees on Phuket Island. *L. scabra* (Linnaeus), *L. carinifera* (Menke), *L. strigata* (Philippi), *L. pallescens* (Philippi), and *L. intermedia* (Philippi). Differences in shell and penial morphology between them are described. *L. pallescens* is polymorphic for shell colour, the others are monomorphic. The first three are restricted to bark. *L. pallescens* lives on leaves and *L. intermedia* lives mostly on bark but sometimes extends onto leaves. Experiments show that it is more likely to do so than *L. pallescens* is to move onto bark. In October and November high frequencies of copulation are sometimes observed in *L. pallescens*, but apart from pairing individuals the snails are distributed singly on the leaves. On the seaward side of mangroves they reach a density of 4–8 per m of edge. Morph frequencies are relatively constant from site to site, but non-dark morphs are at a significantly higher frequency on *Avicennia* than on *Rhizophora*. The frequency of the orange morph is 0–6 percent, while yellow has a mean frequency of 13 percent on *Rhizophora* and 26 percent on *Avicennia*. These frequencies are similar to those found in other parts of the range of *L. pallescens*. Ecological data on the co-existing species are essential before the factors generating and maintaining the polymorphism can be understood.