

**SIZE DEPENDENT RESISTANCE TO WAVE ACTION IN THE INTERTIDAL  
GASTROPOD *LITTORINA LITTOREA* (L.)**

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**ABSTRACT**

Within species of littoral gastropods changes in size frequency distributions along exposure gradients are often observed. Size dependent susceptibility to wave action has been offered as an explanation for these patterns. However, the literature contain conflicting views on the relative susceptibility of small and large individuals. A simple experimental design allowing for controlled exposure of snails to turbulent water flow was tested. The experiment supported the claim that large individuals of *Littorina littorea* are more resistant to wave action than small ones. The drag force exerted on shells in flowing water was measured over a range of shell sizes. Coefficients of drag suggest that large individuals can withstand higher water velocities of steady flow. The results are discussed in the context of the hydrodynamic regime normally experienced by littorinids.