

ABSTRACT

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Title: ORGANIC TO MINERAL SHELL COMPONENTS THROUGH MOLLUSCAN SHELL GROWTH STAGES

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The mollusc shell is composed of a calcium carbonate (CaCO_3) mineral component and an organic component. The organic component allows for orderly biomineralization and insures shell structural integrity that is crucial to the animal's survival. The organic component typically amounts to 2-5 % of the mollusc shell. A previous experiment using the Asian clam *Corbicula fluminea* (Müller, 1774) demonstrated that relatively young molluscs may have a larger shell organic proportion (Richard and Prezant, unpublished data). In the current experiment, the shell organic proportion was measured in the marine snails, *Crepidula fornicata* (Linnaeus, 1758), *Littorina littorea* (Linnaeus, 1758), and *Littorina saxatilis* (Olivi, 1792). The organisms were separated, by taxon, into small, medium, and large size classes to determine any significant differences in shell organic proportion as the animal grows. In each of the marine snail species, the average organic proportion of the small size class was found to be significantly different from the average organic proportions of the medium and large size class snails.