

Microgrowth banding patterns in the shell of the cockle,  
*Fulvia mutica* from Korea

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Growth banding, consisting of a pattern of narrow tidally deposited dark bands and wider light growth increments, was identified in acetate peel replicas of shell sections of live collected cockles, *Fulvia mutica* collected subtidally from Jukdo, Korea. The total number of dark growth bands and the inter-band distance (i.e. growth increments) were counted and measured respectively using image-processing software. The age of the cockle was estimated by counting the number of dark bands in the sectioned shell and the prominent dark lines in the umbo region. The oldest cockle determined using these methods was 6.5 years. The width of the umbo growth increments varied from 23.4  $\mu\text{m}$  in the 3rd to 1.2  $\mu\text{m}$  in the 6th year of growth. Each wide light tidal increment was dated and the width of the increment compared with the daily seawater temperature; a positive correlation between increment width and seawater temperature was observed opening up the possibility of using the tidal increments for environmental reconstruction of shell growth rates.

Keywords: *Fulvia mutica*, microgrowth, water temperature, environmental reconstruction, Korea