

Ultraviolet radiation (UVR, 280–400 nm) is known to be lethal to several aquatic species; however, more subtle, 'sublethal' effects of UVR have recently received more attention. Larvae of the crab *Cyrtograpsus altimanus* are a transient component of the plankton community in the Atlantic northern Patagonia (Argentina) and thus they may be exposed to solar UVR in both open and coastal waters. The aim of this study was to determine if previous sublethal UVR exposure on larvae of *C. altimanus* affects development, body size and motility. Larvae which were pre-exposed to UVR had a delay/absence of molting from Zoea I to Zoea II, coupled to arrested body growth, but showed enhanced swimming behavior. In contrast, the control group (i.e., exposed only to visible light) molted from Zoea I to Zoea II after 6–9 days, with a significant increase in body size, and did not change their motility. Since hatching of this species occurs in summer (i.e., season with highest UVR levels) our results suggest that, by significantly affecting development, growth and motility, natural UVR may influence the plankton–benthos coupling in coastal waters.