

**Distribution and Abundance of Northern Abalone (*Haliotis kamtschatkana*)  
in Relation to Habitat and Predators in Pacific Rim National Park Reserve of Canada**

**T. Tomascik<sup>1</sup> and H. Holmes<sup>2</sup>**

<sup>1</sup>Parks Canada, Western Canada Service Centre, 300 – 300 West Georgia Street, Vancouver, BC V6B 4B4,  
< [tomas.tomascik@pc.gc.ca](mailto:tomas.tomascik@pc.gc.ca) >, Phone: 604-666-1182. <sup>2</sup> Parks Canada, Pacific Rim National Park Reserve  
of Canada, Box 280, Ucluelet, BC V0R 3A0

Baseline information on the distribution and abundance of *Haliotis kamtschatkana* was recorded in the Broken Group Islands (BGI) of Pacific Rim National Park Reserve of Canada (PRNPR) in shallow – (2 – 5 m), and deep water (6 – 9 m) habitats. The study demonstrated that Northern abalone vary spatially with depth. Significantly higher densities of abalone ( $0.18 \text{ abalone/m}^2 \pm 0.02 \text{ SE}$ ) were found in shallow vs. deeper habitats ( $0.10 \text{ abalone/m}^2 \pm 0.02 \text{ SE}$ ). Juvenile abalones were more abundant in deeper water than in shallow water. There was a positive correlation between size of Northern abalone and the abundance of benthic macroalgae, and an inverse relationship between the size of Northern abalone and the abundance of Red Sea Urchin (*Strongylocentrotus franciscanus*). Distribution and abundance of selected invertebrates associated with Northern abalone, including its known predators (sea otter, octopus, crab) were also assessed. Detailed surveys of the associated organisms and substrate types suggest that the distribution of *H. kamtschatkana* is a complex function of community interactions and substrate habitat characteristics.