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Morphological variability of intertidal *Eisenia arborea* (Laminariales, Ochrophyta) at Punta Eugenia, Baja California Sur

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Water motion is one of the main drivers in morphological variability in species within de order Laminariales, and most of our current knowledge is based on subtidal populations. *Eisenia arborea* is a dominant kelp species in the North Pacific, widely distributed along the Baja California Peninsula from mid intertidal down to subtidal areas. This species presents great variability in the intertidal zone but it has not been yet evaluated such variability according to wave exposure. The present work also identifies the spatial / temporal variation, particularly respect to the presence of stipes without medulla (hollow stipes) a feature common among other brown seaweeds. We evaluated the effects of wave action in morphological variation of intertidal *Eisenia arborea* (Laminariales, Ochrophyta) at Punta Eugenia. The spatial and temporal variation sampling was surveyed between February, May, July, and August 2004 in the intertidal of Punta Eugenia, Baja California Sur. Our results have shown that exposed sites correlate with increased length and width of stipes as compared to more protected sites. Hollow stipes frequency changed more in association with temporal variation than with spatial heterogeneity suggesting nutrient limitation for thalli development. Our results suggest that *Eisenia arborea* compensate by morphological modifications the stress of living in the intertidal zone by showing larger stipes. Hollow stipes might be are also a mechanical adaptation to increase survival in high energy environments.

Palabras clave: Eisenia arborea, intertidal, Laminariales, morphological variability