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The Assimilation and Distribution of Dissolved Organic Matter By Planulae of Sea Anemones

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Poster Presentation P74

**THE ASSIMILATION AND DISTRIBUTION OF DISSOLVED ORGANIC MATTER
BY PLANULAE OF SEA ANEMONES**

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The free-living developmental stage of sea anemones (phylum Cnidaria) is the planula larva. In general the feeding biology of planulae is poorly known and there is only one report of the ability of planulae to assimilate dissolved organic materials (DOM, specifically amino acids) from seawater (Ben-David-Zaslow and Benayahu, 2000). We examined the ability of planula larvae to assimilate dissolved proteins and polysaccharides from seawater and then distribute these materials throughout their bodies. Planulae were incubated, for known time intervals, in seawater containing ferritin, iron dextran, or bovine serum albumin (1mg / mL) and examined using light and fluorescence microscopy. With longer exposure times there was an increase in the amount of label in only the larval pharynx and endoderm; there was no evidence that these materials were distributed to the overlying ectoderm. Our results reveal a potential source of nutrition for the development of planula larvae.