Impact of predator and prey presence on *Asterias forbesi* oscillatory gait

Sea stars are marine invertebrates in the phylum Echinodermata. *Asterias forbesi*, Forbes' sea star, are abundant in the intertidal and subtidal zones throughout the Atlantic coast of the United States. These organisms use podia to prey on food, escape predators, and move through their habitats. The goal of this research was to observe the utilization of an increased locomotory gait velocity in the presence of prey and predators. It was determined through video analysis, that a significant difference between all treatments within each sea star existed; however, when data were compared as a subsample it was determined that mean sea star gait velocity was highest during the mussel prey treatment. Recent studies have correlated increased sea star locomotory velocity with a secondary locomotory gait termed the bounce gait, where sea stars used podial coordination to create a vertical oscillation having frequency and wavelength of motion.

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