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Alternate Trophic Pathways Support Enhanced Bathypelagic Biomass Over a Mid-Ocean Ridge System

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Tracey Sutton, Jeanna M. Hudson, Joel C. Hoffman, Tone Falkenhaug, Odd Aksel Bergstad, and M. Heino
**THE EFFECT OF SALINITY ON PARTICLE FILTRATION RATES OF THE WEST AFRICAN MANGROVE OYSTER, CRASSOSTREA TULIPA**

The potential for developing a fisheries industry based on the West African mangrove oyster is high in Ghana. The oyster, Crassostrea tulipa, is a euryhaline organism that thrives in the coastal lagoons of the Ghanaian shoreline. The organism is commonly known, yet further research should be done in preparation for fishery development. Subsequently, this experiment focused on exploring the precise relationship between salinity and filtration rates of the oyster. Oysters gathered from two types of coastal lagoons (closed/open) were exposed to salinities (parts per thousand: %) varying from 0% to 35% and filtration rates were measured based on one-hour intervals. Data showed that salinity had no significant effect on particle filtration rate (measured in parts per million per minute) of a given oyster type. However, significant difference did exist between the filtration rates of oysters collected from the two different types of lagoon; oysters collected from the closed lagoon had a significantly greater mean filtration rate across all salinity levels than oysters collected from the open lagoon (3.485 ppm/min, open lagoon; 6.567 ppm/min, closed lagoon). This may indicate the presence of two distinct sub-types of C. tulipa.

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