

Letters of Intent: Lau Basin
Target Date: August 15, 2003

Biogeography and community structure in mussel beds at Pacific hydrothermal vents.

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Funding is requested to continue community structure and biogeographic analysis of organisms associated with hydrothermal vents. Work completed to date has led to the acquisition of a unique, quantitative assessment of diversity and faunal similarities and differences among vent and seep mussel beds from vent sites along the East Pacific Rise and the Mid-Atlantic Ridge and seep sites in the Atlantic and Gulf of Mexico. These samples provide a rich context within which to interpret the faunal composition and structure in mussel beds in an area south of the Easter Microplate (38°S) and in the Lau and Fiji back-arc basins. Specimens will be collected using our standard gear from two discrete mussel beds at each of the 3 primary sites. Once collected, samples will be processed using the standard protocol established in our lab, and identified with the help of the extensive voucher collection maintained at The College of William & Mary, and with the aid of taxonomic specialists as necessary.