

Sponge Research Progress Report

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(1) Test in a large-scale field experiment the importance of sponge community biodiversity on habitat utilization by adult and newly recruited benthic and motile fauna.

- This experiment is now underway and we will be making our first observations of recruitment effects in May.

(2) Test in mesocosm experiments the influence of sponge community biodiversity on filtration effects on water column planktonic communities and water chemistry.

- The mesocosms have been built and tested and are operable at KML. We have started preliminary trials.

(3) Test whether the restoration of sponges and their biodiversity can also restore underwater soundscapes typical of unimpacted hard-bottom habitat.

- These studies are nearing completion and we have begun analyzing the results thus far.

Sponge Filtration Rates		
Common name	Scientific name	Filtration rate
Sheepswool	<i>Hippospongia lachne</i>	34.37
Loggerhead	<i>Sphectospongia vesparium</i>	17.6
Brown branching	<i>Ircinia sp.</i>	25.1
Vase	<i>Ircinia campana</i>	28.83
Grass	<i>Spongia graminea</i>	18.26

Table 1. Sponge filtration rates from Kauffman (Unpublished). Rate is mL H₂O/hour/mL sponge biomass.



Average filtering rate of these 5 species with a diameter of 25 cm = 425 gallons per hour