

Population Structure Of The Mediterranean Solitary Coral *Balanophyllia europaea*.

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Balanophyllia europaea is a simultaneous hermaphroditic, brooding coral species, and is endemic to the Mediterranean Sea. The population structure and biogeography of *B. europaea* were determined for eight populations found in the Mediterranean Basin around Italy. Population genetic theory predicts that if *B. europaea* is a hermaphrodite, it will self-fertilize frequently leading to inbreeding and a significant deficit of heterozygotes in the populations. Three microsatellite loci were used to test this hypothesis; and the hypothesis that the swimming, pelagic larvae of this brooder coral will produce significant gene flows within small spatial scales causing populations at large scales to be genetically structured. Preliminary results of this study do seem to support these hypotheses; however, more analyses and the creation of several new polymorphic loci are required to fully support these hypotheses and will be carried out in the near future and reported in a subsequent paper.