

Hellberg, M. E. and M. S. Taylor. 2002. Genetic analysis of sexual reproduction in the dendrophylliid coral *Balanophyllia elegans*. Mar. Biol. 141: 629-637.

The ahermatypic scleractinian *Balanophyllia elegans* has served as a model of limited larval dispersal in an asexual species. However, other species from the same family (Dendrophylliidae) produce larvae asexually and closely connected polyps of *B. elegans*, potentially the result of asexual reproduction, are commonly observed in the field. Here, we use a combination of laboratory experiments, controlled crosses, and genetic surveys of field-collected individuals to demonstrate: 1) marker allozymes are inherited in accordance with Mendel's laws, 2) polyps that are connected in the field are not genetically identical, and 3) laboratory manipulation of a single polyp can produce a second polyp on the aboral side of the original, but not adjacent to the original. In combination, these results suggest that the larvae of *B. elegans* result from mictic sexual reproduction, and that connected polyps result not from asexual budding but rather the fusion of genetically distinct individuals.