



FAU Institutional Repository

<http://purl.fcla.edu/fau/fauir>

This paper was submitted by the faculty of [FAU's Harbor Branch Oceanographic Institute](#).

Notice: ©1976 The Society for Integrative and Comparative Biology. This is an electronic version of an article published in *American Zoologist* <http://icb.oxfordjournals.org/> and may be cited as: Eckelbarger, K. J., & Chia, F.-S. (1976). A scanning electron microscope study of the life history of *Phragmatopoma lapidosa* (Polychaeta: Sabellariidae) [Abstract]. *American Zoologist*, 16(2), 213.

A SCANNING ELECTRON MICROSCOPE STUDY OF THE LIFE HISTORY OF PHRAGMATOPOMA LAPIDOSA (POLYCHAETA: SABELLARIIDAE).
Kevin J. Eckelbarger and Fu-Shiang Chia, Harbor Branch Foundation, Fort Pierce, Fla. and Dept. of Zoology, University of Alberta, Canada.

Scanning electron microscopy (SEM) was utilized in a developmental study of this reef-building polychaete from the egg, through larval metamorphosis and the early juvenile stages. The sperm are modified from the "primitive" polychaete type. The unfertilized egg has a pitted surface which becomes papillated after fertilization. The egg membrane serves as the cuticle in the trochophore larva but appears to be lost in the later larval stages. Morphological changes which occur during larval metamorphosis are illustrated with SEM and several systematically-important larval characters are described. Clusters of "sensory hairs" are scattered over the surface of the larvae in the later larval stages but are particularly concentrated on the tentacles, tube-building organ, and near the mouth, suggesting a sensory function during larval settlement and substrate selection.