

67-3 Allen, JD; William and Mary;

jdallen@wm.edu

### Larval cloning in brittlestars

The recruitment of new individuals into marine habitats is a critical determinant of community structure, yet much of our understanding of the ecology of marine invertebrate embryos and larvae remains rudimentary. One fundamental assumption of most life histories, that one egg yields one offspring, has been demonstrated to be false under a number of conditions and in a number of taxa. In this talk, our understanding of the production of multiple offspring from a single egg, referred to as polyembryony or cloning, will be re-examined for ophiuroid echinoderms. New insights into the mechanisms, induction and frequency of larval cloning will be provided for the brittlestars, in which larval cloning has been described, but few details have been reported. In particular, new data and a new mode of larval cloning will be described for the daisy brittlestar, *Ophiopholis aculeata*. Preliminary data will also be presented on the ecological consequences of cloning for brittlestars, focused on the potential costs of clone production on larval size, development time and survival to metamorphosis.