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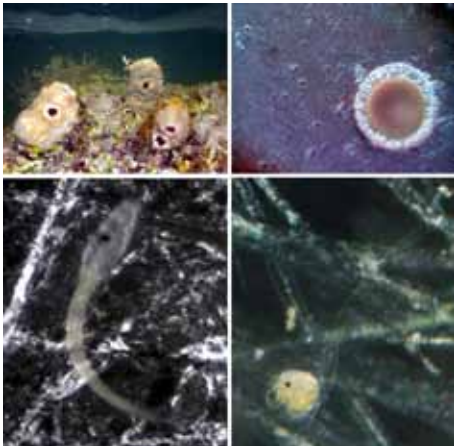
What size sperm should a sea squirt squirt? Causes and consequences of plasticity in sperm phenotype.

Thursday 16 February 2012 1 – 2pm

EEG Seminar

Dr Angela Crean Evolution & Ecology Research Centre, UNSW

Gould Seminar Room (Room 235), Building 116, Daley Road, ANU



Although classic sperm competition theory has focussed on sperm number, recent attention has turned to the role of sperm quality (sperm phenotype) in postcopulatory sexual selection. Despite this surge of interest, we still lack a comprehensive understanding of the causes and consequences of variability in sperm phenotype. There is growing experimental evidence that males can adjust their sperm phenotype in response to their social environment and perceived risk of sperm competition. What are the consequences of this sperm plasticity? Can sperm phenotype influence offspring phenotype? What size sperm should a sea squirt squirt?

Selection on sperm phenotype is expected to be particularly strong in marine broadcast spawners, where both eggs and sperm are released into the water column and fertilization occurs externally.

My research utilizes this highly tractable system to examine plasticity in sperm phenotype, and to explore links between sperm and offspring phenotype.

Recent recognition of the fundamental importance of nongenetic inheritance has caused a paradigm shift in our understanding of evolution. However, while the importance of maternal effects is widely accepted, paternal effects are still largely ignored. Links between sperm and offspring phenotype are likely to have far-reaching consequences for the way we interpret phenotypic variation and evolution.

Presented by

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