ANU Seminar

EVOLUTION, ECOLOGY, & GENETICS RESEARCH SCHOOL OF BIOLOGY

Thursday 1st September 2011, 1pm



Big Events in the Life of a Coral: Gastrulation and Settlement (Studied with the Aid of High-Throughput Sequencing)

> **Dr Eldon Ball** Evolution, Ecology and Genetics The Australian National University

This talk will feature the work of two recent departures from the Ball-Hayward lab, postdoc Nami Okubo and Honours student Ros Attenborough. Their projects were linked by two things; both involved critical stages in coral development and both were facilitated by high-throughput sequencing.

Corals are diverse in both adult morphology and patterns of development. Nami compared early development and gastrulation in morphologically diverse corals and was able to solve a controversial problem by comparing the expression of several genes which are involved in gastrulation. High throughput sequencing allowed us to clone suites of homologous genes from diverse species with remarkable efficiency and at remarkably low cost.

At settlement and metamorphosis corals undergo a dramatic morphological and behavioural change, transforming from a larval planktonic stage to the more familiar sessile benthic stage. Settlement is mediated by the nervous system, which is destroyed shortly thereafter, only to reappear post settlement. The recent compilation of the coral genome and transcriptome by Sylvain Forêt and collaborators allowed Ros to establish the sequences of several neurotransmitters and with this information, plus the use of confocal microscopy, to characterize what was happening to the nervous system during these dramatic events. Her work will be placed in the broader context of our studies of the changes that occur at settlement and metamorphosis.

For further info please contact: Dr Paul Waters, 02 6125 8367, paul.waters@anu.edu.au



Seminars are held in the Gould Wing Seminar Room, Building 116 Daley Rd, ANU ALL STAFF AND STUDENTS ARE WELCOME TO ATTEND