



# Boom and Bust: The proliferation and extinction of *Anadara granosa* across northern Australia

THE CENTER FOR SUSTAINABLE ECOSYSTEM SOLUTIONS PRESENTS:

Dr Brent Koppel, UOW

Date: Thursday 30<sup>th</sup> August

Time: 16:00 - 17:00

Venue: Building 20 Theatre 3 (20.3)

Refreshments will be provided

## ABSTRACT

Coastal archaeology in Australia is characterised by shell middens. These ubiquitous deposits are most commonly associated across Australia's tropical north and are typically comprised of a single species of mollusc - more often than not the mudflat bivalve *Tegillarca* (= *Anadara*) *granosa*. The abundance of this taxon within an equally predominant class of archaeological deposit hints at immense significance to the prehistoric peoples that targeted this species through time. Middens that have been dated point to a narrow window of the exploitation of this species focused on the late Holocene; from approximately 4,000 years to 400 years BP. After this, midden building ceased, and *T. granosa* went extinct. Theories have been passed around for decades attempting to account for this sudden and continent-wide extinction, with varying degrees of plausibility and demonstrable evidence. Theories ranging from small scale explanations like over-predation by human populations, to larger scale processes such as environmental change forcing shifts in ecological niches, yet none have come close to conclusively addressing the case of the rise and fall of *T. granosa*.

This presentation will present the case of *T. granosa* in Holocene Australia through an archaeological lens, as well as outlining the evidence we do and do not have in explaining the patterns we observe. It will become clear that archaeology does not hold all of the answers, and in all likelihood, the solution will take the form of a rich tapestry of processes across both anthropic and environmental explanations. As such, this will be less of a seminar, and more of a short presentation acting as a primer towards a much broader discussion inclusive of a wider catchment of expertise. Following a short presentation, an open forum is encouraged to discuss ideas future avenues of investigation in addressing this phenomenon.

## BIOGRAPHY

After completing his undergraduate degree in Geosciences, Brent went on to complete his Honours and recently PhD research through the Centre for Archaeological Sciences at the University of Wollongong. His research focuses principally on molluscs in archaeological contexts with an emphasis on the investigation of the formation and transformation processes of archaeological deposits using amino acid racemisation (AAR) dating. Sites and regions he has worked in include Australia and through the Pacific and Island Southeast Asia; including, Indonesia, Papua New Guinea, the Solomon Islands and New Zealand. Carrying on with a passion of anything mollusc, Brent's current research centres on landsnails in archaeological deposits from the Kimberley, Western Australia, geochemical approaches to midden shell, and the novel application of non-invasive techniques in the analysis of pearls - all the while maintaining ongoing studies into shell midden archaeology.



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