

## Nau mai, haere mai

Ngāi Tahu Research Centre invites you to attend the  
December 2017 Seminar



**Presenter: Ani Murchie**

### **‘Ecological and sociocultural indicators of estuarine shellfisheries in Hawai`i and Aotearoa NZ’**

**Date:** Friday 8th December 2017  
**Time:** 2.30pm – 3.30pm  
**Venue:** Room 208, Te Ao Marama Building

#### **Abstract:**

Estuaries rank among the most anthropogenically impacted aquatic ecosystems on earth. There is growing evidence of similar impacts in O`ahu (Hawai`i) and Waitaha/Canterbury (Aotearoa New Zealand), which consequently impacts the ecological, social, and cultural values. The protection of these values is legislated for within both Pacific Islands, as well as the management of waterways from ‘ma uka ma kai’/‘ki uta ki tai’.

The current condition of estuarine shellfish beds according to ecological and socio-cultural values from land to sea is investigated to better inform management. Shellfish abundances, condition, and contaminant concentration were evaluated, and compared the landscape development index, physico-chemical gradient and management regimes. The socio-cultural values utilised interviews to evaluate site and catchment environmental condition, resource abundances and changes, and management effectiveness of these systems.

In O`ahu, clam beds were sparse compared to the introduced oyster, and the former coincided with elevated sediment contaminants. In Waitaha, clams (pipi and tuangi/cockles) were more abundant than the low-rock dwelling oysters. Cockle tissue contaminants were elevated at specific sites, which coincided with poor tissue condition index, especially nearest freshwater input.

The interviews shared shellfish was not an important recreational fishery due to long-term restrictions. However there were efforts towards culturing native and introduced shellfish and fish species alongside restoring cultural-ecological food systems. In Waitaha, shellfish areas were important although there are site and area specific restrictions to harvesting and wading. In particular, Ngāi Tahu harvesting values and environmental scoring were compromised more often than those who identified as other cultural groups.

Overall, both the ecological and cultural findings recognised the surrounding catchment and freshwater input as a source of anthropogenic stress. Particular sites of elevated contaminants shared site similarities that can further guide monitoring and restoration efforts. ‘Land to sea’ management systems were recommended by Indigenous and non-Indigenous environmental specialists.

**RSVP** for this event by contacting: [mel.eade@canterbury.ac.nz](mailto:mel.eade@canterbury.ac.nz)

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