

Hannah Jones

PhD Candidate



Department: [Biological Sciences](#)

Research Project: The role of the suspension-feeding bivalve, *Austrovenus stutchburyi*, in estuarine ecosystems

Qualification: BSc (Hons)

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Location: University of Waikato main campus

Research Interest

Suspension-feeding bivalves such as *Austrovenus stutchburyi*, commonly known as the cockle, pump water through internal gills, removing phytoplankton and suspended particles from the water column, and by production of faeces and pseudofaeces, increase the flux of organic matter to the seabed. As well as this 'top-down' control on phytoplankton populations, suspension-feeding bivalves exert 'bottom-up' control by altering nutrient regeneration processes and provide other ecosystem services, such as reducing turbidity, thereby increasing light penetration to the sediment surface and potentially increasing submersed macroalgal and benthic algal production. When individual filtration rates of several litres per hour are scaled up to ecosystem level it is predicted that these animals play a critical role in regulating energy flows in estuaries.

In many New Zealand estuaries populations of suspension-feeding bivalves are declining due to a combination of over harvesting, sedimentation and pollution. In overseas systems the loss of suspension-feeding bivalves has been associated with large-scale shifts in ecosystem structure and function. To date the impact of suspension feeder loss from New Zealand estuaries has not been fully explored.

I intend to use a combination of field and laboratory experiments to measure bivalve population structure, feeding rates and nutrient fluxes. Data from these studies will then be used to parameterise an existing ecosystem model to examine the impact of declining bivalve populations on phytoplankton populations, nutrient fluxes and energy flow within an estuary.

Publications:

Jones, Hannah (2008) *Coastal Sedimentation: What we know and the information gaps*, Environment Waikato Technical Report 2008/12, Environment Waikato, Hamilton.

About me

After completing a degree in Oceanography with Marine Biology at the University of Southampton, (UK), I came to New Zealand on holiday and stayed after meeting my husband. Prior to starting at Waikato University I worked as a Technician in freshwater and coastal ecology at Environment Waikato, which gave me an introduction to the Waikato Region's estuaries (and some mud). When not working I like to go surfing and snowboarding.

