

## The Avon-Heathcote Estuary Ihutai Summer Research Projects

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While the end of year break is a time when many students relax and recharge, others use this time to develop the new skills they have learnt throughout the year. Over the summer period there are opportunities for university students all across New Zealand to participate in a wide variety of summer research projects. This year the Avon-Heathcote Estuary Ihutai, located on the eastern side of Christchurch City, was central to five summer research studentships (four at Lincoln University and one at Canterbury University). The Avon-Heathcote Estuary Ihutai research was not only an opportunity for the students to practise and refine their new skills, it also created a chance for an effective collaboration between students, local government, and the community.

Lincoln University offers a broad array of summer research projects each year and the 2009/2010 summer was no exception. The main objective of the Lincoln University Estuary summer research scholarships was to aid in the continuous improvement of the quality of postgraduate training in the Faculty of Environment, Society and Design (FESD). This was accomplished by providing students planning to enrol in postgraduate study with an opportunity to gain research experience outside thesis/dissertation work.

The Avon-Heathcote Estuary Ihutai research projects were funded by Environment Canterbury, the Avon-Heathcote Estuary Ihutai Trust (AHEIT), the Tertiary Education Commission and Lincoln University (as part of the Summer Studentship Programme). This combination of supporters allowed the five students undertaking the research to meet, engage with, and learn from the professional expertise of, each representative from each organisation. It also allowed a time for the representatives from each organisation to meet, engage with, and learn from each other.

Although the Estuary was central to all five research projects, the topics were only loosely knitted together. This allowed everyone involved the flexibility to establish and pursue both individual and communal goals. The 13 'key' personalities from Environment Canterbury, the Avon-Heathcote Estuary Ihutai Trust, and the two universities, were held together by a non-statutory 'ambition' to explore a particular place using both social and natural science. The areas of interest were history, tourism, recreation, contemporary food-gathering practises, and shrimp distribution and abundance.

Before the research began in November a meeting was held at Lincoln University with the key personalities. Students and supervisors from both universities attended, as did representatives from Environment Canterbury, and the Avon-Heathcote Estuary Ihutai Trust. During this time information and ideas were shared in a non-competitive manner about the research which lay ahead. Contact details were exchanged and a support network was established for the students to utilise.

The Avon-Heathcote Estuary Ihutai Trust has been supported

by the Christchurch City Council and Environment Canterbury since it officially formed in 2002. The AHEIT members have a deep understanding of the Estuary's environment and management. The Trust has worked closely with the community and in 2004 they developed a non-statutory management plan, the Ihutai Management Plan 2004. Trust member Chrissie Williams, also a Christchurch City Councillor, attended the research brief and kindly made herself available if need be. The Environment Canterbury representatives were equally as eager to ensure that everyone involved gained the most they could from the research experience. Shelley Washington coordinated the five projects and organised the group meeting, and the presentation advertising and evening. Leslie Bolton-Ritchie, who has been involved in the Estuary's comprehensive water monitoring programme - 'Healthy Estuary and Rivers of the City' generously offered her extensive knowledge and expertise throughout the summer period.

All lecturers involved in the research had something unique to contribute. Dr Roy Montgomery of Lincoln University, supervisor and AHEIT member, organised a group field visit to help set the research on track. Professor Islay Marsden, a marine biologist at Canterbury University, took both Canterbury University and Lincoln University students into the field. This allowed students to learn from her wide-ranging local knowledge regarding the ecology of the area and her awareness of current seafood collection practices. Lincoln University's Dr Greg Ryan and Dr Joanna Fountain were extremely supportive and their knowledge in the fields of history and tourism was greatly appreciated by the students carrying out the research. Dr Suzanne Vallance of Lincoln University, who has researched urban sustainability for some time, intends to use some of the research carried out over the summer as an input into a larger research project investigating risk and reward in the 'city environment'.

The community played a large role in the research undertaken over the summer at Te Ihutai. Two of the research projects included a combined telephone survey of 385 Christchurch City residents, and an onsite survey which included surveying a total of 140 visitors at the Estuary. The surveying process was an enjoyable way to meet and talk with people who use and respect the Estuary. Many of those surveyed shared stories of past experiences as well as predictions or desires for the future of the Estuary's environment. Qualitative data were also collected for two of the research projects through a series of stakeholder interviews. These surveys and interviews gave the community a voice on a range of issues relating to the future potential of the area.

The five research topics were undertaken from November 2009 through until February 2010. Each topic required the student to complete a final report and to present their findings to interested parties and key stakeholders on June 1st 2010 in the Waiiau Theatre at Environment Canterbury. The Estuary summer research was a great success and the presentation evening on June 1st further highlighted this. The presentations

were an appropriate way to conclude the research as it was an opportunity for all involved to meet again and discuss the most significant findings. For the students it was encouraging to see key stakeholders and interested parties attend and contribute to the evening's discussions.

The research that was undertaken over the summer included:

1. The Avon-Heathcote Estuary/Ihutai: a historical assessment of its recreational and social history Felicity Boyd, Lincoln University, Supervisors: Dr Joanna Fountain and Dr Greg Ryan. The Estuary has been an invaluable resource for the people of Christchurch for as long as it has existed. Felicity Boyd's summer project report provides a detailed account of the social and recreational history of the Estuary from pre-European times to the present day, documenting a number of significant changes in environment and use over this time. If you are interested in reading this report please email: Felicity.Boyd@lincolnuni.ac.nz
2. Food Gathering Practices in the Avon-Heathcote Estuary/ Ihutai Kelly Fisher, Lincoln University, Supervisor: Dr Suzanne Vallance. Traditionally the Avon-Heathcote Estuary/ Ihutai and surrounds was a significant food gathering area, and people continue to collect seafood there today. Lincoln University student Kelly Fisher conducted both qualitative interviews and a quantitative survey so as to explore various seafood gathering practises at the Estuary. The research investigated the types of seafood being collected, where seafood collection is taking place, and the seafood gatherers awareness of collection regulations. The results revealed an 'active' food gathering population of approximately 4,000 people who were collecting seafood fairly routinely (confidence level of 95% and a confidence interval of 1.13) just prior to the new ocean outfall becoming operational. The survey indicated that this number is likely to increase as latent gatherers become active as they perceive the new outfall will have a positive effect on the Estuary's water quality. To view a copy of this report please visit: <http://hdl.handle.net/10182/2190>
3. Tourism and recreation around the Avon-Heathcote Estuary/Ihutai Sheena Crawford, Lincoln University, Supervisor: Joanna Fountain. The aim of Sheena Crawford's summer research was to assess current usage, awareness, and perceptions of tourism and recreational opportunities at the Avon-Heathcote Estuary. This was achieved by conducting two surveys over the summer period, one with Christchurch residents by telephone and the other onsite with people using the Estuary. If you are interested in reading this report please email: Joanna.Fountain@lincoln.ac.nz
4. Tourism Potential of the Avon-Heathcote Estuary – Perspectives of Key Stakeholders about current and future demand-

Catherine Lizamore, Lincoln University, Supervisor: Dr Roy Montgomery. With the Estuary's Ramsar (intergovernmental treaty for wetlands of international importance) application on the horizon, this two-part project sought to explore the tourism potential of the Avon-Heathcote Estuary. The first part of the project included mapping out and creating an inventory of the current tourism-related infrastructure in the areas surrounding the Estuary. The second part of the research involved interviewing potential stakeholders to gain an understanding of what they thought the tourism potential of the Estuary is. If you are interested in reading this report please email: Catherine.Lizamore@lincolnuni.ac.nz

5. Abundance and Distribution of Shrimp in the Avon-Heathcote Estuary Gabrielle Davey, University of Canterbury, Supervisor: Ass Prof Islay Marsden. Over the summer shrimp were sampled at a number of locations in the Estuary and up the Avon and Heathcote Rivers. They were sampled using a variety of techniques including a drag net, a modified Norfolk push net and a hand net. Surprising densities of shrimp were collected and catches consisted of young, mature and reproductive adults. Further analyses will determine the effects of environmental conditions on the densities.

If you are interested in reading this report please email: islay.marsden@canterbury.ac.nz

With precious natural resources such as the Avon-Heathcote Estuary Ihutai, it is only natural that a variety of different stakeholders are interested in the area's history, management, and future development. This summer research project brought together a collection of people, from diverse backgrounds and professions, to work together for a range of collective and individual goals. What could have been a disaster instead resulted in a great example of how research collaboration might evolve. This summer's research programme created an opportunity to explore and investigate a central location from a variety of different perspectives. Sharing information in a non-competitive and open manner was a fundamental aspect of the projects' success, as was coming together once the research was complete to share with, and learn from, one another.

*\* Kelly Fisher is in her third year at Lincoln University completing a Bachelor of Environmental Management and Planning, with a major in Water Science and Technology, and an additional minor in Professional Planning. Once she completes her undergraduate degree at the end of this year she is planning to continue her studies through into the postgraduate level.*

*Figure 1 (below): Shellfish gatherers at Beachville Road. Image taken by Kelly Fisher.*

