

## CSE100C Travel Report — Conference Participation

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**Related CRDC Project Number** CRC17C

### Conference attended

International Symposium on Biological Control of Arthropods, January 14-18, 2002, Honolulu, Hawaii, USA.

### Reason for travel

This symposium was the first conference held specifically for biological control of arthropods and follows the successful model of four-yearly symposia for biological control of weeds. Attendance was limited to 250 people with only a single session to maximise participation and exchange of information. It was an excellent opportunity to hear the latest research developments in several relevant areas, including the use of molecular methods to estimate predation, the use of alternative habitats to conserve natural enemies and the effects of Bt crops on beneficial insects. My current project investigates the ecology of key predators and their impact on *Helicoverpa* populations. At present an ELISA system is being tested and this system will be used to quantify predation on *Helicoverpa armigera* in cotton. However this area of research is changing rapidly with new techniques under constant evaluation and development.

### Outcomes and highlights

At the conference I met with James Hagler (who visited James Lytton-Hitchins in Narrabri and assisted with the initial development of ELISA protocols for beneficial predators found on cotton in Australia) and discussed my current work and development of the ELISA protocol. Further collaboration with Dr Hagler is likely and his expertise in this field is an asset to the project. Marlijn Hoogendoorn and George Heimpel presented recent work using PCR-based methods to estimate predation frequency. Matthew Greenstone also presented research using ELISA technology to detect parasitism rates. It was useful to see the benefits and limitations of different methods for assessing field predation and parasitism.

The session about the effects of Bt crops (cotton and corn) in IPM systems was very informative. Topics covered included changes in insecticide regime, impacts on beneficial insects and resistance management. Other sessions addressed the use of habitat refuges to encourage natural enemies, the importance of nectar feeding to parasitoids, monitoring non-target effects from introduced biological control agents and the economics of augmentative biological control.

In general the conference proved a valuable opportunity to renew and make contacts within the international scientific community. Conference proceedings will be published later this year and the papers included will be a useful resource for myself and other researchers at ACRI.