



Post-graduates on ILWS scholarships

Manu Saunders

Each year, thousands of bee hives are brought to the big almond orchards near Mildura and Robinvale in NW Victoria so that the bees can pollinate the almond blossoms, as almonds rely completely on insect pollination to set nuts.

But the big concern is what happens if some of the world's major bee threats, such as Colony Collapse Disorder and Varroa mites, finally reach Australia's shores and decimate our populations of European honey bee.....what then? Will there be native pollinators around that can do the job?

Hopefully there will be and once PhD student Manu Saunders, 28, has finished her research, we will have a much better understanding of who does what. Manu, who is an ILWS PhD scholarship recipient, is looking at pollination in agricultural landscapes. Her PhD is aligned with A/Prof Gary Luck and Dr Peter Spooner's ARC Discovery project, Designing Landscapes to Deliver Ecosystem Services to Agriculture, an ARC Linkage grant with large almond producer Select Harvest, and Gary's ARC Future Fellowship on ecosystem services.

Manu, who grew up on Queensland's Sunshine Coast, went to the University of Queensland in Brisbane after high school where she did a Bachelor of Arts in English Literature and Journalism. She then worked in Sydney for a year in corporate communications before deciding to travel "around a bit" and ended up working as a governess at a cattle station near Longreach. "I'd always been interested in the outdoors and agriculture but working out there made me realise how passionate I was about that field," says Manu. "So I decided I wanted to do something that would lead me to a career that would involve writing more about environmental issues rather than just general journalism." Manu then enrolled, again at the University of Queensland, in a Bachelor of Environmental Science, majoring in ecology. Her Honours project was on developing a methodology to evaluate the success or otherwise for a biological control agent released by the Queensland Department of Primary Industries and Fisheries for the weed, Cat's claw creeper (*Macfadyena unguis-*

cati). The methodology has now been adopted by the department for future evaluations and Manu is a co-author on a paper just published in the journal *Biological Control*.

After her Honours she worked for her supervisor Dr Margie Mayfield at the University of Queensland on a casual basis before taking on a five month job with QDPI&F researching stored product pests such as beetles that infest grain silos. In March this year she began her PhD under principal supervisor A/Prof Gary Luck, Dr Mayfield and Dr Geoff Gurr who is based at Orange. "I'm looking at the various elements of landscape structure and how they affect pollinators," says Manu who is focussing initially on pollinators in almond orchards, and how they are affected by the different landscapes around them. So far Manu, who has done three sampling trips, has looked at four different farms – two of which are large scale conventionally managed orchards and two smaller biodynamic farms.

The native pollinators she is looking for include native bees, wasps, hover flies, flies, butterflies.... "There are issues with the longevity of the European honey bee in Australia so for the almond industry, which is worth a lot of money to Australia, it is important to know if there are native pollinators that can pollinate almonds," explains Manu. For life after her PhD Manu says it is too early to know. "The things I am interested in are teaching and communicating," says Manu who has started her own blog on environmental issues at <http://manuelinor.wordpress.com>. "I never wanted to be a school teacher but you can teach people through writing."



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