

# Glideways Symposium

Seymour, March 2016

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Symposium Presentation No 4

## Keeping gliders surviving in an urbanizing landscape

**Sam Niedra**

Coordinator, Albury Conservation Company,  
PO Box 323 Albury NSW 2640

[info@alburyconservationco.org.au](mailto:info@alburyconservationco.org.au)



Albury  
Conservation  
Company

*Sam described the activities that Albury Conservation Company has undertaken in conserving Squirrel Gliders in Thurgoona/Wirlinga area in the urban growth corridor of Albury. These cover research, on-ground works and community engagement, and include the Squirrel Glider Urban Nest Box Project.*

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### **Introduction to study area – Thurgoona / Wirlinga, NSW**

The area is about 20,000ha of rural to peri-urban land 8km north-east from Albury . It is part of the urban growth corridor of Albury and the population of 7,850 (in 2011) is expected to increase to 50,000 in 2-3 decades. The Hume Freeway crosses the area.



The natural environment is Box Gum Woodland and a significant amount of this vegetation still remains. Fortunately much of the high quality vegetation is protected as part of the Albury Environmental Lands (managed by NSW Department of Industry - Lands). The “jewel in the crown” is the 85ha Bells Travelling Stock Reserve (managed by Murray Local Land Services). There is also a good network of corridors, mostly along creeklines. In addition, the Albury Wodonga Development Corporation carried out

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a lot of forward tree planting in the 1970s and '80s; these 30-year-old mainly ironbarks have become a feeding site for Regent Honeyeaters and also enhance the connectivity of habitat for threatened species such as the Squirrel Glider.

The Albury Local Environment Plan (LEP) has set aside the areas for conservation so that development can occur in other places with offsets already in place prior to development. This is known as biocertification under the NSW government.

This landscape contains threatened species including the Squirrel Glider and Sloane's Froglet. There are over 200 records of Squirrel Gliders in the area. So the Plan is a big experiment – how are the populations of Squirrel Glider and other threatened species going to fare?

## **Overview of Albury Conservation Company**

Albury Conservation Company was established in 2006 in response to the Hume Freeway duplication. The Freeway removed and fragmented significant habitat for threatened species. This was done before the current offsetting arrangements were in place. The NSW Government recognised the impact of the Freeway and gifted \$500,000 to the community, and ACC was born. ACC is a non-government, not-for-profit, community based organisation with a Board consisting of local residents and representatives of key organisations. It has observers from the NSW Office of Environment and Heritage, NSW Department of Industry – Lands, and Murray Local Land Services. Albury Conservation Company has engaged a coordinator (Sam Niedra – Better State Environments) since 2010 to implement its Strategic Plan.

The Mission of ACC is “to help protect and enhance the natural environment of Thurgoona /Wirlinga in NSW, and to raise awareness and engage the local community in protecting biodiversity for future generations.” Put another way, we want to see in 30 years that we have created a great thriving community but have not sacrificed our threatened species in the process. So this is a great experiment.

The Company has three areas of focus: biodiversity-related research; on-ground conservation works; and community education/engagement/capacity building.

## **Biodiversity-related research**

ACC has commissioned several studies including:

Population Viability Analysis for Squirrel Gliders in Thurgoona NSW (Australian Research Centre for Urban Ecology, 2009). Rodney van der Ree and Kylie Soanes (ARCUE) are currently engaged in the development of a Squirrel Glider Monitoring Plan (in draft).

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The influence of urban encroachment on Squirrel Gliders (*Petaurus norfolcensis*): Effects of road density, light and noise pollution (Charles Sturt University, 2013)

PhD study recently completed by Alex Knights (CSU) on the distribution of Sloane's Froglet in southern NSW and northern Victoria.

Thurgoona and Wirlinga Community Understanding & Knowledge of Biodiversity (Gull, Laird & Black, CSU, 2013). This study will look at how knowledge, values and attitudes towards biodiversity have changed over 30 years and identify opportunities to engage and share information.

For more information, see

<http://www.alburyconservationco.org.au/projects/research/> and [www.alburyconservationco.org.au/resources](http://www.alburyconservationco.org.au/resources).

## On-ground conservation works

### Revegetation

Over 10 hectares have been revegetated since 2012 including Thurgoona Golf Club, local schools, farms, and 5km of roadsides to improve habitat connectivity for Squirrel Gliders. Sites are mostly small but strategic to improve connectivity.



### Nest boxes

Before 2011, nest boxes were not mapped in the Thurgoona/ Wirlinga area. Trinity Anglican College knew the location of their nest boxes and regularly monitored them. But other people did not have records. Now approximately 520 nest boxes are mapped. This mapping originated with a student project at CSU instigated by ACC in 2011. ACC funded Thurgoona Golf Club & National Environment Centre to map its boxes in 2013, and Albury Environmental Lands (NSW Department of Industry - Lands) mapped its boxes in 2013.



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These studies came up with some interesting discoveries! Not all boxes could be referred to as nest boxes and bees, structural damage, wear and tear were identified as issues. An important issue was the challenge of maintaining nest boxes as a collective resource with multiple landholders and stakeholders.

It was not all bad news though! Gliders were found on the Thurgoona golf course for the first time, using a nest box. They were also observed using nest boxes at a variety of locations, including Trinity Anglican College.

### Hollow-bearing trees

ACC recognises the habitat significance of hollow-bearing trees in Thurgoona / Wirilinga, for Squirrel Gliders and a range of other fauna species. But these trees have not previously been mapped. In 2011, a student from CSU mapped trees under the guidance of ACC and in 2013 ACC funded a survey of hollow-bearing trees on Thurgoona golf course. Overall, 140 hollow-bearing trees were surveyed during this time. Then the NSW Government Environmental Trust supported an expanded mapping program and an additional 360 trees have been mapped since March 2015. Data being collected includes co-ordinates, species, dbh (diameter at breast height), number of hollows, whether it's dead or alive, and photos. At Bells TSR the density is 3.5 hollow-bearing trees per ha on average, which is well under the NSW definition of high quality woodland. So even in this conservation reserve we are starting from a low base. This data is being provided to Albury City Council for creation of a hollow-bearing tree overlay, available to Council staff to inform development planning and vegetation management.



## **Community education, engagement and capacity building**

### Case study – Squirrel Glider Urban Nest Box Project



*Engagement with the local community* is a key to conservation – so why not a backyard project to help a threatened species? In a 2013 study, 0/300 respondents said that they had seen a Squirrel Glider on their own property. 100 nest boxes were funded by The Great Eastern Ranges initiative (GER) via the Slopes to Summit (S2S) partnership.

*Selection of glider box locations.* A strategic approach was used – we didn't want a "giveaway off the back of the truck" approach. Areas were prioritised according to:

- proximity to native vegetation patches (e.g. Albury Environmental Lands)
- presence of a tree suitable to house a nest box
- proximity to other trees (within 40m of another tree where animals could move)
- proximity to previous Squirrel Glider sightings.

Properties were self assessed by owners and verified via maps and visits.

Cat owners were not excluded. Cats from other properties are equally a threat, and the project was seen as an opportunity to start a conversation about cat management.

*Production of nest boxes by Thurgoona Men's Shed:* Before production, we held a meeting of all stakeholders to discuss and agree on nest box design. 15 members of the Thurgoona Men's Shed were directly involved in the project – most had never been involved in threatened species projects before! The project tapped into a wealth of knowledge/expertise at the men's shed, and the guys did much of their own learning through research and questions in conversation. They incorporated some innovative modifications into the design of the nest boxes including:



- A metal bracket that attaches to the tree via screws and fixes the box in place using a pin. This has reduced the overall weight of the box and makes installation easier and safer.
- A rubber baffle that deters Indian Mynas, an introduced pest bird species, but allows easy access of a pole-mounted camera into the nest box entrance hole. The baffle design appears to block more light than the conventional timber baffle (or no baffle) which may result in deterring European Bee colonisation, although this is yet to be confirmed.

Installation of the nest boxes was undertaken by Parklands Albury Wodonga and completed in July 2015.

*Remote camera nest box monitoring:* this is Stage 2 of the project, to enable "armchair monitoring" of boxes and address the issue of the effort needed for regular monitoring. 15 prototypes are being constructed by Thurgoona Men's Shed led by Mark Watt. The cameras will transmit images to the internet. They will be sold in a nest box or separately (they are easy to retrofit). Estimated retail price is \$250 with box.

### **Future focus of Albury Conservation Company?**

*Hollow-Bearing Trees:* complete Mapping and Retention Project in 2017.

*Squirrel Glider Monitoring Plan* for Thurgoona / Wirlinga: complete in 2016 (ARCUE) and start implementation.

*Cat Tracker:* pilot project in Albury in 2017 in partnership with University of SA, NSW Department of Industry – Lands, and Murray Local Land Services.

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Continue to seek substantial investment to sustain the organisation financially and enable us to continue supporting the local community to conserve threatened species in the long term.

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