

Validating 'hearsay' on biodiversity value of saltbush

Evidence is mounting that saltbush can provide on-farm biodiversity benefits. In response, the Future Farm Industries CRC, through the *Production Perennials for Biodiversity* project, is now investigating what planted saltbush has to offer from a biodiversity perspective.

"There was anecdotal information about fauna in saltbush, but we set out to systematically compare biodiversity in planted saltbush, pasture and remnant vegetation, using birds and invertebrates as measures of biodiversity," said Dr Andrew Fisher (Department of Water, Land and Biodiversity Conservation, South Australia).

"Not surprisingly, we found the remnant vegetation had the most bird species (species richness) and the planted saltbush sites were next, with significantly higher numbers of bird species than the improved pasture sites." (See Figure 1)

Interestingly, three threatened bird species (Elegant parrot, Hooded robin and Restless flycatcher) were recorded in the saltbush plantations, as well as a range of beneficial invertebrates.

The CRC project will build on these findings to look in detail at the way birds use the resources provided by planted saltbush. PhD student, Tim Richards, University of Adelaide will provide support to the project.

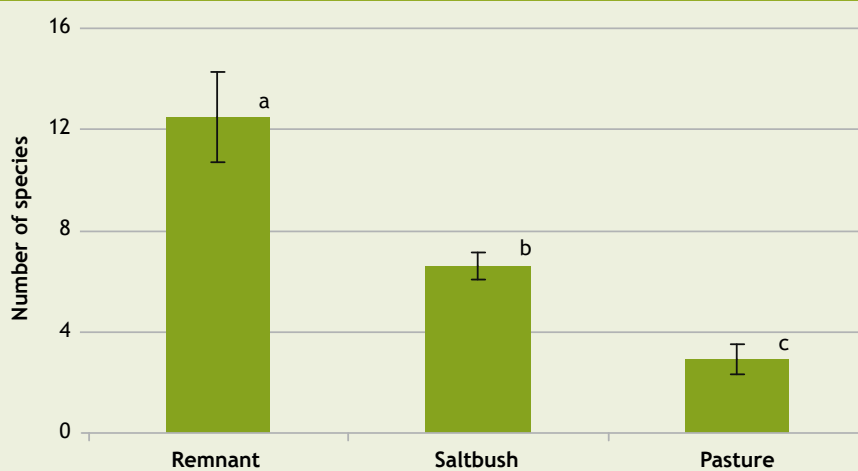
key points

- Previous research has documented a surprising range of bird and invertebrate species using saltbush plantations
- A Future Farm Industries CRC project is investigating how selected bird species are using planted saltbush for food sources and protection in the mallee landscape
- The research will help with the development of management guidelines for saltbush plantations and other fodder shrub species in order to promote sustainable natural resource management.

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ABOVE: Orange Chats (male) perching in a saltbush plantation. (Photo: Stuart Collard)

Figure 1 Bird species richness in remnant, saltbush and pasture sites (treatments)



Note: The results show the mean (\pm standard error) values for species richness for each vegetation type (combined data from six surveys across five sites of each treatment). Means sharing the same letter are not significantly different (*a priori* contrasts $p > 0.05$)

The project team is currently undertaking a literature review and field work will start later this year.

Landscapes with and without planted saltbush will be selected for study across the Murray Mallee of South Australia.

"We will collect information on the time spent by selected bird species in saltbush, and make observations of how the birds are moving in relation to the saltbush and the surrounding bush, what they are eating and where they are nesting," Dr Fisher said.

Understanding leads to win-win

Observations and interpretations from the project will enable better biodiversity management in areas with saltbush plantations for grazing purposes, however, the relationship between birdlife and livestock, when it comes to saltbush, appears already to be relatively harmonious.

"Livestock generally graze planted saltbush at the end of summer and into autumn, so it is a fortuitous twist that birds can use the saltbush as a resource for feeding, protection, and for some species, nesting, from later winter up to about Christmas time," Dr Fisher said.

"Not all landholders use saltbush the same way. Some graze livestock on the saltbush each year, some once every few years, and some haven't used it at all for many years.

"From a landscape perspective, this gives the birds a mix of sites to use, and this is important in understanding how to provide realistic management guidelines to landholders, recognising that the planted saltbush is there to be used by stock."

In addition to land management benefits, the hard data from the project will also help provide information about the biodiversity value of the saltbush system.

"As ecosystem services become better recognised and understood, we will be better placed. Everyone is talking about carbon but there is a host of other things that could be quantified, valued and traded," Dr Fisher said. ⬇

More information

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