## **Ancient knowledge meets** modern science at Toorale

Ancient knowledge met up with modern science when a group of researchers and academics met with traditional owners at **Toorale Station, west of Bourke** at the weekend.

Two of the key researchers involved in the Toorale project, Dr Mark Southwell, and Dr Paul Frazier, from 2rog Consulting, were at Toorale to build a scientific portrait of the channels and floodplains of the National Parks property.

Both said that after years of scientific study of Toorale, this was one of the first times they had the opportunity to understand the site from an indigenous perspective.

Dr Frazier is a scientist with experience in riverine and floodplain geomorphology and environmental flows and said the team spent the weekend gathering measurable data and listening and learning from the original occupants of the area.

Dr Southwell, a Senior Research Fellow Ecosystem Management, said the data from the University of New England research team was vital in designing the monitoring program, with information on water quality, micro and macro-invertebrate surveys, fish and bird surveys and vegetation assessment.

He said it was a big, complex project that involved a team of more

than nine scientists from within the Department of Primary Industries – Fisheries, academia and National Parks.

"We have been monitoring environmental water at Toorale for more than ten years and we are in the process of integrating cultural knowledge into what we do," Dr Southwell said.

"We had the opportunity to have our team of scientists show the traditional owners what we are doing and get perspectives on how they see the country.

"We had a walk around with some of the indigenous elders who showed us the landscape and how they see it as one of their special places. Then we set up a few stations around the property and talked about the methods we use to measure fish, water quality and vegetation," he said.

Dr Frazier said he had been studying the floodplain environment in the Murray-Darling Basin, including Toorale for more than 30 years, but it was only recently that an Indigenous perspective had been included in those studies.

"It is important to listen to Indigenous knowledge, it's critical to us in in restoring and repairing the country and we are incredibly excited to learn from them," he said.

"Toorale was purchased on behalf of National Parks 15 years ago and is a beautiful landscape, with a mostly-intact western floodplain area.

"The broader landscape has been maintained but a fair amount of it has suffered degradation, so our work enables us to look after the vegetation and the birds, frogs, and fish, because it is a critical landscape for this area.

"We are here to listen more than talk and understand those different perspectives and share the knowledge about past times and use that knowledge to improve what we do.

"The stories about the fish traps in the Darling and Warrego Rivers go back at least six or seven thousand years, and we have had the opportunity to do a few walks with local traditional owner Kevin Knight to see the stone implements and hearth sites and that type of management and understanding of the landscape.

"The local people are excited about being heard and that's long overdue. We have been coming here for a while and on one of our first trips we met with people from Maranguka, and for me it has been fulfilling and exciting to keep this journey going," he said.

The research trip was organised



River scientists Dr Paul Frazier and Dr Mark Southwell spent time on country at Toorale last week with local indigenous elders.. PHOTO TWH

as part of a program for the Commonwealth Environmental Water Holder, along with the University of New England and the federal government, and the results will be published in an academic journal.

Dr Frazier said the team was passionate about the research itself and the published outcomes, especially the sharing of knowledge from the past to influence the management of a vital landscape into the future.



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