

CALM SCHOLARSHIPS FOR UWA STUDENTS

The Department of Conservation and Land Management (CALM) will provide financial support for two University of Western Australia students working on the cutting edge of forestry and plantation science.

The scholarships are part of a program initiated by CALM's Executive Director Dr Syd Shea, based on a similar scheme that helped him complete his postgraduate studies at the University of Toronto.

Stephen Burgess of Bicton and Sue Kelly of Waroona will take distinctly different routes to their PhDs, under the guidance of Dr Mark Adams, Associate Dean of the Department of Natural Resource Management at UWA.

Stephen will study the role of trees in lowering water tables under agroforestry systems. As

part of his study, he will travel to Kenya for six months, to the International Centre for Research in Agroforestry, to learn the latest techniques for determining which parts of the soil profile supply the water used by agroforestry trees.

His work will involve investigating various patterns of root growth and looking at ways to measure the development of root channels, and possibly predicted, using soil profile characteristics.

The project is being funded by the Australian Centre for International Agricultural Research and supervised by Dr Neil Turner of CSIRO.

CALM Executive Director Syd Shea said the expertise and knowledge that Stephen brought back from Kenya could be applied to a number of agroforestry plantings around Western Australia.

"He will be in a strong position to assess just how effective trees are in lowering the water table on different soil types," Dr Shea said.

Sue Kelly will work with Dr Adams on a project based in the forests around Pemberton and Northcliffe.

The project, funded by the Australian Research Council, will establish long-term research sites to be monitored for patterns of growth and diversity, and act as 'references' for forests throughout the world.

The forests of Western Australia provide a valuable contrast to the highly polluted forest environments in parts of the northern hemisphere. Trees in areas such as the Black Forest in Germany and the Appalachian mountains of north-eastern USA are declining due to heavy

atmospheric pollution, and the return to the soil of significant amounts of nutrients such as nitrogen (up to 100 kilograms of nitrogen per hectare each year). Such 'overdosing' creates an imbalance and results in toxicity.

The WA forest models established during the project will be used to answer some of the critical questions about exactly why trees in the heavily polluted northern hemisphere die.

"Sue's work will mainly be below ground, examining the role of micro-organisms and fungi in the decomposition of plant litter and organic soil matter," Dr Shea said.

"She will learn more about the buffering role these organisms play, which seems to protect the forest against external influences such as pollution."

Before gaining their CALM scholarships, Stephen completed an honours degree at Murdoch University and Sue, a science degree at Murdoch University and a postgraduate diploma at Curtin University.



Executive Director of CALM Dr Syd Shea, and UWA Associate Dean of Natural Resource Management, Dr Mark Adams, with PhD students Sue Kelly of Waroona and Stephen Burgess of Bicton. Photo - Greg Wood

LANDSCOPE

VOLUME ELEVEN NO. 4 WINTER ISSUE 1996



The Perth Observatory celebrates its centenary this year, and during its 100 years' life it has played some major roles in the world of astronomy. Find out more on page 10.



The Cape Range, in north-west WA, is known for its harsh environment. But if you look a little closer you'll discover the vast 'Range of Flowers' that live there. See page 28.



In 1961, the noisy scrub-bird was rediscovered at Two Peoples Bay. In 1994, the Gilbert's potoroo turned up unexpectedly. Find out more about this haven for the lost and found on page 35.



John Forrest National Park has long been a popular picnicking spot for Perth residents, but this place of beauty has much more to offer. See page 16.



If all goes to plan, the Ord River area, will soon be known as a prime farming area for rare tropical timbers. Find out why on page 23.

FEATURES

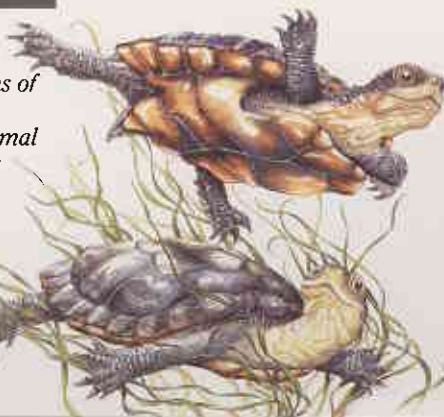
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COVER

Fox-baiting has been shown to be a major tool in rebuilding populations of native animals. Now, scientists are embarking on a Statewide feral animal control program to help bring back native species, such as the western swamp tortoise, from the brink of extinction. The project is called 'Western Shield'.

The story is on page 41.

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