More techies' tales

John Owen

Tackling tall timber

JOHN Owen works in CSIRO Forestry and Forest Products' Tree Improvement and Genetic Resources Program. Much of his time is spent in forests across Australia and Papua New Guinea, pollinating trees, and collecting seed and scions (material for grafting) from treetops.

Access to the forests can be difficult, but the height of the trees' canopy, which may be 40 metres from the ground, presents an even greater challenge for Owen and his colleagues.

'We do controlled pollinations of different tree species, often using an elevated platform or "cherry picker",' Owen says. We then collect the seed from these trees to germinate for field trials in which trees of superior growth and form are selected.'

Owen is also a dab hand with a Ruger 308, another technique used, with great care, to remove seed-laden branches and scions from treetops (see story on page 4). The thin, growing tips of superior trees are then grafted onto seedlings in an arboretum, forming a live plant store and seed source – at a manageable height.

Owen has been at CSIRO for more than 20 years, and before that worked for the Victorian Forestry Commission. He says there's a lot of theory in science, but a lot of practical input is needed to get the job done. That's where the technicians prove invaluable.

An important part of Owen's job is to maintain identities of collected specimens and associated data collation. He says as technicians gain experience, they tend to become more involved in data analysis. He has co-authored some 20 research papers, a part of the job which he finds tremendously rewarding.

Picturing scenarios

ASK Cher Page about her job, and she'll tell you she does the number crunching. And as computer technical officer for the Climate Impact Group at CSIRO Atmospheric Research, she has no lack of numbers to crunch.

Page provides the pictures that climate researchers need to communicate their findings. That generally involves conjuring meaningful graphs and images out of numerical databases. For this she draws on her degree in maths and computer science.

'I talk to the scientists and find out what their needs are for an end product,' Page says. 'Then I gather the raw information and manipulate it using software packages, or a programming language called Fortran.'

Scientists then use the pictures to help verify their interpretations of the data, to present research results among their peers, and to illustrate the significance of their work to a wider audience.

With colleagues in the Climate Impact Group, Page is working on the development of OzClim, a 'user friendly' software package that generates climate change scenarios and simulates potential climate change impacts on the environment and primary production for regions of Australia.

'I'm not sure how many scientists recognise the work done by technicians, but in this division they certainly do,' Page says. We're all specialists in our own field: they supply the idea, I have to put it into practice.'

A leading librarian

THE life of a librarian can be full of new experiences. In fact, for Tricia Larner, the past four years have seen never a dull moment.

Since 1994, Larner has managed the Tropical Beef Centre's Library and Information Service at CSIRO's Rendel Laboratory in Rockhampton. Her responsibilities range from managing a site library and a beef industry information service to facilitating the adoption of electronic resources, such as scientific journals.

'The push is to get information to the desktop which is great news for both the librarians and the scientists. We're exploring issues such as cost, perpetual access to archive copies, copyright, licensing agreements and training,' she says.

In August this year, Larner won the Queensland Special Librarian of the Year Award, the first time for a regional librarian. During research for a masters degree, she is investigating the best way of making an intranet (an organisation's internal Internet) successful as an information resource for researchers. She is also developing an instructional CD-ROM for beef producers, to help them get started on the Internet.

'In today's electronic information environment, scientists can suffer from information overload,' Larner says. 'Librarians have the skills and the expertise to filter the relevant information from the vast array available, ensuring staff have flexible access to current information vital to their research, thereby saving time and money.'

Bryony Bennett

Cher Page

Paul Holper, CSIRO Atmospheric Research

Tricia Larner

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