

Rewriting THE textbooks

By Peter Kanowski

> Australian forestry education providers face enormous challenges in building a skilled workforce for the future <

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Australian National University forestry students, above, on a field course in Laurel Hill, NSW. Photo by Peter Kanowski. First-year students, above right, learning about forests at ANU's coastal campus in Kioloa, NSW. Photo by Richard Baker.

Biography

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> Australia's forests are unique, so learning how to manage and conserve them was a challenge for foresters educated elsewhere. The emergence of forestry education here was influenced both by Australia's British heritage, with its strong cadre of imperial foresters trained in the European tradition, and by the new North American thinking shaped by that continent's abundant forests.

Professional forestry education began in Australia in the early 20th century, in response to concern over the wanton destruction of forests that characterised the late 19th and early 20th centuries. The first programs were established in South Australia and Victoria around 1910. Les Carron's *History of Forestry in Australia* recounts how the heads of the fledgling state forest agencies agreed that a national approach was desirable, and met several times in the early 1920s to decide the form and location of a national forestry school - even travelling en masse to Laurel Hill near Tumbarumba in the Snowy Mountains, then a favoured site. Ultimately, however, the Australian Forestry School was established in the new national capital, Canberra, in 1927. Old rivalries were not quite dead though, so the Victorian government elected not to participate in the initiative, preferring to maintain its own Victorian School of Forestry at Creswick near Ballarat.

The Australian and Victorian forestry schools educated cadets from Australia, New Zealand and a number of Asian nations until the 1960s. Cadets were sponsored by state or national governments and spent their summer holidays and sometimes field years in field camps, learning on the job as well as in the classroom.

By the 1970s, the two schools had affiliated with the Australian National and Melbourne universities, respectively; New Zealand had established its own forestry school at Canterbury; and the first women had enrolled in forestry degrees. By the 1980s, as Australian higher education expanded, the state forest agencies ceased offering cadetships, and universities and employers competed for students' interest. Two new programs, at Queensland and Southern Cross universities, began in the 1990s, and two more, at Edith Cowan and Tasmania, early this decade. By this time, about half of forestry students were women. For much of the 20th century, education and training for forestry technical and field staff were conducted principally on the job, and largely informally. Victoria

REGAINING THE TRUST

Australian foresters have an enviable reputation overseas, as demonstrated in part by the senior roles they have filled in other countries and in international organisations. At home, however, the profession has not enjoyed such a high status of late, which reflects the political tensions over forests that have characterised the past 30 years, and an associated community perception that foresters and forestry focus on wood production at the expense of other forest values. Perhaps the greatest challenge for foresters and the sector is to redress that perception by recovering the trust of the wider community. There are many reasons this is both desirable and possible. Glen Kile, former chief of CSIRO Forestry and Forest Products, and executive director of the Forest and Wood Products Research and Development Corporation, says 'people love both trees and wood, and want to have both'. Reconciling these demands is the core business of forestry. In addition, the positive role trees and forest-based industries can play in restoring degraded landscapes, as well as contributing to diversified farm businesses and rural economies, is now well recognised. These underlying factors suggest that Australia will continue to need knowledgeable and skilled foresters and forest sector workers. Now that conservation of Australia's native forests has been placed on a more secure footing, the sector and the community should be able to shift the focus from points of difference to the positive contributions that forestry and forest industries can make to the country's environment, economy and society.



> Urbanisation and changes in farming have influenced the appeal of forestry careers based in rural and regional areas <

was an exception, with the Creswick school training technical and professional staff, and Queensland established a Forestry Training Centre in the 1980s. By the 1990s, these had been absorbed into the larger tertiary education system. Correspondingly, there was relatively little formal training for field operators until the 1980s and 1990s, when TAFE sector programs were established in most states.

Australian forestry has changed much in the past few decades. Most of the domestic sawnwood supply now comes from softwood plantations; eucalypt plantations, principally grown for pulpwood but increasingly also for solid wood, have grown from negligible to an area of about 800,000 hectares; public native forest managed solely for conservation has increased substantially with the expansion of national parks consequent to the Regional Forest Agreements and similar developments; and farm forestry has become more important.

Public forest agencies now operate on a commercial basis, the majority of Australia's plantation forests are privately owned, and there is greater diversity of employment in the sector. Forest management, operations and industry have become more technologically advanced and capital intensive. Universities have updated curricula to allow for more flexibility and specialisation, and to emphasise skills in business, conservation management and new technologies. Many forestry students undertake joint degrees, and about half of Australia's universities now have research students working on forest topics. The sector's emphasis on continuing education has also seen more staff completing TAFE and other industry training programs.

At the same time, Australia has become more urbanised and there have been significant changes in the nature of farming. These trends have influenced the appeal of forestry careers based in rural and regional areas. By the early part of this decade, an emerging skills shortage was becoming apparent; in forestry management, operations and processing industries, demand for qualified staff exceeded supply. Industry associations began to work with governments and employers to redress the situation - how successfully remains to be seen.

Although the number of forestry courses has risen, few are attracting enough students to sustain the breadth of teaching programs most would like, or satisfying demand for graduates - both thorny issues in Australia's increasingly market-mediated higher education system.