

2011

Forestry at Southern Cross University: fifteen years in review

Diana Lloyd
Southern Cross University

J Doland Nichols
Southern Cross University

Kathryn H. Taffs
Southern Cross University

Jerome K. Vanclay
Southern Cross University

Publication details

Post-print of: Lloyd, D, Nichols, JD, Taffs, KH & Vanclay, JK 2011, 'Forestry at Southern Cross University: fifteen years in review', *International Forestry Review*, vol. 13, no. 4, pp. 500-510.

International Forestry Review has kindly given permission to upload the full-text of this article to the SCU repository

[The International Forestry Review homepage can be found here.](#)

The full text article can also be purchased online at:

<http://dx.doi.org/10.1505/146554811798811353>

Forestry at Southern Cross University: fifteen years in review

D. LLOYD¹, J.D. NICHOLS², K.H. TAFFS² and J.K. VANCLAY²

¹*Southern Cross University, PO Box 1425, Mt Gambier SA 5290, Australia*

²*Southern Cross University, PO Box 157, Lismore NSW 2480, Australia*

Email: JVanclay@scu.edu.au

SUMMARY

After 15 years, it is timely to review the 4-year bachelor degree in forestry offered by Southern Cross University (SCU), now the only remaining such 4-year degree in Australia. The SCU program is characterised by innovative teaching, a strong fieldwork component, emphasis on research, and strong links with local interest groups (both environmental and industrial). The progressive introduction of two-site delivery and on-line lectures has maintained the viability of the course despite modest student demand.

Keywords: forestry education, bachelor degree course, research

Foresterie à l'université Southern Cross: révision des quinze dernières années

D. LLOYD, J.D. NICHOLS, K.H. TAFFS et J.K. VANCLAY

Après 15 ans, il est temps d'examiner la licence de 4 ans en foresterie offerte par l'université Southern Cross (SCU), à présent le seul diplôme de 4 ans en foresterie en Australie. Le programme SCU est caractérisé par un enseignement innovatif, un élément important sur le terrain, un accent sur la recherche ainsi que des liens solides avec les groupes d'intérêt locaux (environnementaux et industriels). L'introduction progressive de deux sites de cours magistraux, ainsi que de cours par ordinateur ont réussi à maintenir la viabilité du cursus, malgré la demande modeste dont il est témoin.

Ciencias Forestales en la Universidad de Southern Cross: una revisión tras quince años

D. LLOYD, J.D. NICHOLS, K.H. TAFFS y J.K. VANCLAY

Después de 15 años, parece apropiado revisar la licenciatura de 4 años en ciencias forestales ofrecida por la Universidad de Southern Cross (SCU), que es la única que ofrece en Australia dicha titulación con una duración de 4 años. El programa de SCU está caracterizado por una docencia innovadora, un componente de campo sustancial, énfasis en investigación, y lazos estrechos con grupos de interés local (tanto medioambientales como industriales). La introducción progresiva de la formación en dos campus y ofrecer clases en línea han mantenido la viabilidad del curso a pesar de una modesta demanda por parte de los estudiantes.

INTRODUCTION

Forestry training and research commenced at Southern Cross University (SCU) in 1996, with the introduction of a 4-year degree of Bachelor of Applied Science (Forestry). In the intervening 15 years, the program has been revised and renamed Bachelor of Forest Science and Management, and supplemented with complementary degrees including a Graduate Diploma of Forestry, and a coursework Master of Forest Science and Management. Although growth has been modest, student numbers at Southern Cross University during these 15 years have run counter to national and international trends of declining enrolments in forestry (Leslie *et al.* 2006, Innes 2010). This paper reviews selected SCU Forestry achievements and identifies aspects that may help strengthen tertiary forestry programs elsewhere.

The history of forestry education in Australia has been documented elsewhere (Carron 1980, Roche and Dargavel 2008, Collett 2010), so it suffices to observe that in recent times, SCU was the third university in Australia to offer a 4-year bachelor degree in forestry, after the University of Melbourne in 1943 and the Australian National University in 1964. Three other Australian universities briefly offered comparable degrees (Vanclay 2005c), but these offerings have been short-lived due to a shortage of students. More recently, both the University of Melbourne and the Australian National University have ceased to offer 4-year forestry degrees, with the University of Melbourne adopting the 'Bologna model' (a generic 3-year bachelor degree followed by a 2-year masters degree in forestry), and the Australian National University switching to a 3-year forestry degree within a broader environmental program. SCU's response to the changing student demography was to establish a satellite program at Mount Gambier in the 'Green Triangle' region of southern Australia (so-named because of the concentration of forest industry). Since 2005, students have been able to study SCU's forestry program in Lismore or in Mount Gambier, with units offered via a combination of online lectures, local tutors and residentials. The Mount Gambier program has been strongly supported by local industry, with companies offering staff study-leave, offering scholarships and vacation employment, and offering employment to graduates.

In response to a recognised shortage of foresters in Australia (Anon 2009), several tertiary and vocational education providers work closely with government and industry to attract more students into forestry-related study within Australia. One of these initiatives is a series of scholarships worth AU\$10,000 sponsored by the Institute of Foresters of Australia and available to students who either enter an undergraduate forestry program in their first year or who transfer into forestry studies in their second or third year.

TEACHING FORESTRY AT SCU

The forestry curriculum at SCU is characterised by small classes offered in two locations (Lismore in eastern Australia, and Mt Gambier in southern Australia), supplemented with

FIGURE 1 SCU Forestry field class, 2011



regular field trips (Figure 1), interactive tutorials (e.g., Vanclay *et al.* 2006) and on-line support (reading material and video-recordings of lectures available for download). Students at the Lismore campus have the choice of weekly face to face lectures, or on-line lecture recordings available on demand. The curriculum at both Lismore and Mt Gambier includes tutorials, practicals and field work, which may be conducted weekly or during intensive residential programs. This means that students have a great choice in how to learn – ranging from weekly face-to-face classes to online on-demand with intensive workshops – satisfying diverse student learning styles. Courses are informed by regular internal and external reviews intended to refresh offerings and maintain relevance (Vanclay 2007, Ewan 2009). When appropriate, problem-based learning is favoured (Boyd 2011), and students are assisted to publish findings (e.g., Aenishaenslin *et al.* 2007, Vanclay *et al.* 2011). Students complete sixteen weeks of work experience in approved work placements during their studies (Cullen 2005); these placements foster community engagement, help strengthen the relationship between university and industry, and often lead to offers of employment for the students involved. Several students have used these work placements to gain overseas experience and pave the way to an international career. The Commonwealth agencies Australian Youth Ambassadors in Development (AYAD) and Australian Volunteers International (AVI) also provide opportunities for forestry graduates to gain international experience. In some cases they are specifically nominated to be associated with university-led research projects. The Australian Centre for International Agricultural Research (ACIAR) project on silviculture of the native Vanuatu species Whitewood (*Endospermum medullosum*) recently sponsored two AYAD volunteers, each of whom spent six months on the island of Espiritu Santo Island, Vanuatu. SCU values this international engagement, and has hosted forestry students from Bhutan, China, Germany, Indonesia, Laos, PNG, Solomon Islands, Vanuatu and Vietnam. There is currently an active two-way exchange agreement with Northern Arizona

TABLE 1 Graduate destinations of SCU Forestry graduates

Category	Frequency
Government Forest Services	45%
Private Industrial Forestry Companies	17%
Further Study	6%

University in Flagstaff, Arizona, USA, which enables students to substitute one or two semesters at the exchange institution. These opportunities diversify the experience of all students helping them to become global citizens able to respond to management issues with a diverse knowledge of environmental and cultural issues.

The majority of forestry students at SCU are ‘mature-age’, defined by Australian authorities as students over 20 years old. Few of the students entering the SCU forestry program are “school-leavers” who have just completed high school, and most have had some years of experience in the workplace. In many cases students are in their thirties or forties and undertake the undergraduate degree to enable a career change. In some cases (Mt Gambier in southern Australia), most of the students have long been employed by the industry and their formal qualifications will facilitate a promotional pathway to professional positions with their current employer. The SCU program recognises prior learning and experience, and the diversity of the curriculum allows independent learning to meet the needs of both younger and mature students within the same unit cohort.

Employer and graduate surveys consistently reveal the need for diverse skills, especially with regard to communication (Vanclay 2007, Jacobsen *et al.* 2008). Thus oral presentation and writing skills are emphasised within SCU’s degrees, and students are encouraged to publish research arising from honours (e.g., Pelletier *et al.* 2008), graduate diploma (e.g., Thinley *et al.* 2005) and doctoral programs (Angel *et al.* 2008, Bristow *et al.* 2006, Grant *et al.* 2010, Kariuki *et al.* 2006a,b, Leys and Vanclay 2011a,b).

FORESTRY RESEARCH AT SCU

Research is one of the strengths of the SCU Forestry program, with a steadily increasing output of research findings spanning the breadth of forestry (Table 2). Particular strengths are arboreal fauna (Goldingay 2009), community engagement (Leys and Vanclay 2011a), forest genetics (Shepherd and Raymond 2010), forest health (Lan *et al.* 2011), growth modelling (Weiskittel *et al.* 2011), mangroves (Saenger and Brooks 2008, Stokes *et al.* 2010), mixed species plantings (Nichols *et al.* 2006, Forrester *et al.* 2011), native forest silviculture (Kariuki *et al.* 2006a), plantation management (West 2006), policy (Lloyd 2008, Vanclay and Nichols 2005), and wood science (Raymond *et al.* 2010a). Figure 2 illustrates the co-authorship network amongst the SCU forestry staff, along with key topics identified by the citation analysis package CiteSpaceII (Chen 2006). Figure 2 is a minimum spanning

tree that eliminates redundant links, but the remaining non-redundant links reveals the extent of collaboration reflected as coauthorship of journal articles.

Most forest research at SCU is conducted in partnership with end-users such as land management agencies and forest industries, helping to maintain relevance and prompt uptake of research findings. These client relationships are supplemented with a commitment to publish research findings, and to monitor impacts (Vanclay 2008a,b, 2010a, 2011a).

SCU is a member of the International Union of Forest Research Organizations (IUFRO) and SCU forestry staff are active as IUFRO office-bearers. This relationship with IUFRO facilitates professional networking and fosters specialist mentoring that can otherwise be difficult to arrange within small institutions. SCU participates in other international endeavours including EFIMED (the Mediterranean Regional Office of the European Forestry Institute) and the IUCN (International Union for Conservation of Nature) Commission on Education and Communication.

COMMUNITY ENGAGEMENT

Consistent with SCU’s mission to ‘be regionally relevant and globally significant’, forestry staff and students engage with professional and community groups such as the Institute of Foresters of Australia, Australian Forest Growers (AFG), and the Subtropical Farm Forestry Association (SFFA). The SFFA is a non-governmental organisation involved in promoting on-farm tree planting, particularly in the moist subtropics surrounding Lismore (in eastern Australia), but also in generally advocating farm forestry for the country. University researchers have supported the AFG, SFFA and other interest groups by assisting with field days, conferences and workshops, as well as by contributing current research findings in accessible ways through association newsletters. SCU faculty have also assisted in writing funding proposals and make in-kind contributions of their time and expertise when projects are supported. For example, with SCU support, the SFFA recently received a \$350,000 grant from the national ‘Caring for Our Country’ scheme that focuses largely on forests for biodiversity and conservation outcomes.

Several SCU Forestry staff have been recognised for their achievements: Dr Ross Goldingay was awarded the 2011 Vice-Chancellors’s award for Excellence in Teaching and Learning for “authentic, field-based learning about wildlife conservation that illuminates the nexus between teaching and research”. Diana Lloyd is a director of Australian Forest Growers, the national association representing private forestry and commercial tree-growing interests in Australia. Dr Doland Nichols has been recognised as a Fellow of the Institute of Foresters of Australia. Dr Graeme Palmer is secretary of the Australasian Timber Drying Group. Prof Jerry Vanclay is a member of the advisory group to EFIMED (the Mediterranean Regional Office of the European Forestry Institute) and received the 2010 IUFRO Scientific Achievement Award. This recognition reflects both their calibre and commitment.

TABLE 2 Selected research outputs from SCU Forestry

Topic	Planted and natural <i>Eucalyptus</i> forest	<i>Pinus</i> and other conifers	Mixed and indigenous plantings	Mangroves	Rainforests	Environmental services and non-wood products
Genetics and tree breeding	Hamilton et al 2008, 2009, Jones et al 2001, 2006, Le et al 2009, Ochieng et al 2007a,b, 2008, 2010, Sexton et al 2010, Shepherd & Raymond 2010, Shepherd et al 2005, 2010.	Elliott et al 2005, Raymond 2011, Raymond & Henson 2009, Raymond et al 2009, 2010b, Scott et al 2005, Shepherd & Williams 2008, Shepherd et al 2002a,b, 2003a,b, Wielinga et al 2009a	Shepherd et al 2006, 2007b, 2008a,b, 2011,	Arnaud-Haond et al 2006, Maguire & Saenger 2000, Maguire et al 2000a,b, 2002, Sheue et al 2009	Shepherd et al 2007a	Jones et al 2008
Forest dynamics, modelling, physiology	Bristow et al 2006, Listyanto et al 2010, Grant et al 2010, West et al 2008a,b	Palmer & Vanclyay 2009, Skovsgaard & Vanclyay 2008, Vanclyay 2009a, 2010a, Vanclyay & Sands 2009	Bosu et al 2006, Forrester et al 2006, 2011, Grant et al 2006, Kelly et al 2009, Nichols & Carpenter 2006, Nichols et al 1999a, Vanclyay 2006a,b	Iftekhar & Saenger 2008, Saenger & Brooks 2008, Youssef & Saenger 1998, Stokes et al 2010	Kariuki et al 2006a,b, Nebel et al 2001a,b, Sheil et al 2006, Smith et al 2005	Rose et al 2010, Specht & West 2003, Vanclyay et al 2008a, West 2009, 2011
Silviculture, Forest health, Wood science	Angel et al 2008, Lan et al 2011, Murphy et al 2005, Pelletier et al 2008, Raymond et al 2010a, Shepherd et al 2000, Stone et al 2010, Thinley et al 2005, Vanclyay et al 2008b	Chan et al 2010, 2011, Raymond & Joe 2007, Raymond et al 2007, 2008, 2009, Toulmin & Raymond 2007, Wielinga et al 2009b	Hanson et al 2005, Nichols et al 1999b, Nichols et al 2001, Specht & Turner 2006, Streed et al 2006,	Saenger et al 2008	Nebel et al 2001c,d, Smith & Nichols 2005	Vanclyay 2009b
Forest fauna	Ball & Goldingay 2008, Ball et al 2011, Beyer & Goldingay 2006, Beyer et al 2008, Eyre & Goldingay 2005, Goldingay et al 2007, Harris et al 2007, Lloyd et al 2006, Sharpe & Goldingay 2007, 2010	Goldingay et al 2010	Christidis et al 2008, Goldingay 2009, Goldingay & Stevens 2009, Goldingay & Taylor 2009, Taylor & Goldingay 2010	Eyre & Maher 2011	Goldingay et al 1996	Goldingay & Whelan 1997, Goldingay et al 2011, Hayes & Goldingay 2009
Other: Policy, Socio-economics, History	Barbour et al 2008, Leys & Vanclyay 2010, 2011a,b, Nichols et al 2010,	Johnson et al 2006, Vanclyay 2005b, West 2006	Jago & Boyd 2003, Mertens et al 2004, Nichols et al 2006, Pearce et al 2003, Prastyono et al 2011, Vanclyay 2001, Vanclyay 2006c,	Saunders and Taffs 2009	Jago & Boyd 2005, Torrence et al 2009	Lloyd et al 2005, 2010, Munyasi & Nichols 2007, Putz et al 2008, Stubbs 2008, Vanclyay 2005a, 2010b, 2011b, Vanclyay & Nichols 2005

FIGURE 2 Minimum spanning tree of co-authorship, showing key researchers and activity, computed by CiteSpaceII (Chen 2006) with data from Web of Science. Colour spectrum indicates date of collaboration (blue=1996, red=2011)



CONCLUSIONS

SCU, like most educational institutions, seeks to create a quality learning experience for students, and it is our view that success in inspiring students to become self-motivated life-long learners will also lead to success for the host institution. Even though funding limitations may constrain the available resources, our experience is that a quality experience can be provided through innovative teaching informed by current research and illustrated with field trips and other hands-on experiences. Our experience also reveals that strong community engagement is mutually beneficial and produces graduates who are global citizens well-equipped to become forestry leaders.

REFERENCES

- AENISHAENSLIN, S., CONVERY, K., GUA, B., SPAIN, M. and TUNSTALL, L. 2007. Private native forest policies in New South Wales, Queensland, Victoria and Tasmania. *Small-scale Forestry* **6**: 141–155.
- ANGEL, P.J., NICHOLS, J.D. and STONE, C. 2008. Biology of *Creiis lituratus* Froggatt: (Hemiptera: Psyllidae), pest on *Eucalyptus dunnii* Maiden in plantations: Morphology, life cycle and parasitism. *Australian Forestry*, **71**(4): 311–316.
- ANONYMOUS 2009. Skills: Rural Australia's Need. Government response to the Report of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry, September 2009. Department of Agriculture, Fisheries and Forestry. 25 p.
- ARNAUD-HAOND, S., TEIXEIRA, S., MASSA, S.I., BILLOT, C., SAENGER, P., COUPLAND, G., DUARTE, C.M. and SERRAO, E.A. 2006. Genetic structure at range edge: Low diversity and high inbreeding in Southeast Asian mangrove (*Avicennia marina*) populations. *Molecular Ecology* **15**(12): 3515–3525.
- BALL, T.M. and GOLDINGAY, R.L. 2008. Can wooden poles be used to reconnect habitat for a gliding mammal? *Landscape and Urban Planning* **87**(2): 140–146.
- BALL, T., GOLDINGAY, R.L. and WAKE, J. 2011. Den trees, hollow-bearing trees and nest boxes: Management of squirrel glider (*Petaurus norfolcensis*) nest sites in tropical Australian woodland, *Australian Mammalogy* **33**(1): 106–116.
- BARBOUR, R.C., CRAWFORD, A.C., HENSON, M., LEE, D.J., POTTS, B.M. and SHEPHERD, M. 2008. The risk of pollen-mediated gene flow from exotic *Corymbia* plantations into native *Corymbia* populations in Australia. *Forest Ecology and Management* **256**(1–2): 1–19.
- BEYER, G.L. and GOLDINGAY, R.L. 2006. The value of nest boxes in the research and management of Australian hollow-using arboreal marsupials. *Wildlife Research* **33**(3): 161–174.
- BEYER, G.L., GOLDINGAY, R.L. and SHARPE, D.J. 2008. The characteristics of squirrel glider (*Petaurus norfolcensis*) den trees in subtropical Australia. *Australian Journal of Zoology* **56**(1): 13–21.
- BOSU, P.P., COBBINAH, J.R., NICHOLS, J.D., NKRUMAH, E.E. and WAGNER, M.R. 2006. Survival and growth of mixed plantations of *Milicia excelsa* and *Terminalia superba* 9 years after planting in Ghana. *Forest Ecology and Management* **233**(2–3): 352–357.

- BOYD, W.E. 2011. Bridging the Gap from Skills Assessment and Problem-Based Learning: Lessons from the Coalface of Scholarly Engagement with Curriculum Development. *International Journal for the Scholarship of Teaching and Learning* **5**(1) http://academics.georgiasouthern.edu/ijstotl/v5n1/essays_about_sotl/PDFs/_Boyd.pdf
- BRISTOW, M., VANCLAY, J.K., BROOKS, L. and HUNT, M. 2006. Growth and species interactions of *Eucalyptus pellita* in a mixed and monoculture plantation in the humid tropics of north Queensland. *Forest Ecology and Management* **233**(2–3): 285–294.
- CARRON, L.T. 1980. A history of forestry and forest product research in Australia. *Historical Records of Australian Science* **5**(1): 7–57.
- CHAN, J.M., RAYMOND, C.A. and WALKER, J.C. 2010. Non-destructive assessment of green density and moisture condition in plantation-grown radiata pine (*Pinus radiata* D. Don.) by increment core measurements. *Holzforschung* **64**(4): 521–528.
- CHAN, J.M., WALKER, J.C. and RAYMOND, C.A. 2011. Effects of moisture content and temperature on acoustic velocity and dynamic MOE of radiata pine sapwood boards. *Wood Science and Technology* **45**(4): 609–626.
- CHEN, C. 2006. CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature. *Journal of the American Society for Information Science and Technology* **57**(3): 359–377.
- CHRISTIDIS, L., RHEINDT, F.E., NORMAN, J.A. 2008. Habitat shifts in the evolutionary history of a Neotropical flycatcher lineage from forest and open landscapes. *BMC Evolutionary Biology* **8**(1): 193.
- COLLETT, N.G. 2010. A history of forestry education in Victoria, 1910–1980. *Australian Forestry* **73**(1): 34–40.
- CULLEN, M. 2005. Environmental science cooperative education: Benefits for the student, the host organization, and the study program. *Asia-Pacific Journal of Cooperative Education* **6**(2): 1–6.
- CULLEN, M. 2007. The role of cooperative education in developing environmental science skills. *Asia-Pacific Journal of Cooperative Education* **8**(1): 37–52.
- ELIOTT, F., SHEPHERD, M. and HENRY, R. 2005. Verification of interspecific pine hybrids using paternally inherited chloroplast microsatellites. *Forest Genetics* **12**(2): 81–87.
- EWAN, C. 2009. Learning and teaching in Australian Universities: A thematic analysis of Cycle 1 AUQA Audits. AUQA Occasional Publications Number 18, 50 p.
- EYRE, B.D. and MAHER, D. 2011. Mapping ecosystem processes and function across shallow seascapes. *Continental Shelf Research* **31**(2): S162–S172.
- EYRE, T.J. and GOLDINGAY, R.L. 2005. Characteristics of sap trees used by yellow-bellied gliders in southern Queensland. *Wildlife Research* **32**(1): 23–35.
- FORRESTER, D.I., BAUHUS, J., COWIE, A.L. and VANCLAY, J.K. 2006. Mixed-species plantations of Eucalyptus with nitrogen-fixing trees: A review. *Forest Ecology and Management* **233**(2–3): 211–230.
- FORRESTER, D.I., VANCLAY, J.K. and FORRESTER, R.I. 2011. The balance between facilitation and competition in mixtures of Eucalyptus and Acacia changes as stands develop. *Oecologia* **166**(1): 265–272.
- GOLDINGAY, R.L. 2009. Characteristics of tree hollows used by Australian birds and bats. *Wildlife Research* **36**(5): 394–409.
- GOLDINGAY, R.L. and STEVENS, J.R. 2009. Use of artificial tree hollows by Australian birds and bats. *Wildlife Research* **36**(2): 81–97.
- GOLDINGAY, R.L. and TAYLOR, B.D. 2009. Gliding performance and its relevance to gap crossing by the squirrel glider (*Petaurus norfolcensis*). *Australian Journal of Zoology* **57**(2): 99–104.
- GOLDINGAY, R.L. and WHELAN, R.J. 1997. Powerline easements: Do they promote edge effects in eucalypt forest for small mammals? *Wildlife Research* **24**(6): 737–744.
- GOLDINGAY, R., DALY, G. and LEMCKERT, F. 1996. Assessing the impacts of logging on reptiles and frogs in the montane forests of southern New South Wales. *Wildlife Research* **23**(4): 495–510.
- GOLDINGAY, R.L., GRIMSON, M.J. and SMITH, G.C. 2007. Do feathertail gliders show a preference for nest box design? *Wildlife Research* **34**(6): 484–490.
- GOLDINGAY, R.L., SHARPE, D.J. and DOBSON, M.D.J. 2010. Variation in the home-range size of the squirrel glider (*Petaurus norfolcensis*). *Australian Mammalogy* **32**(2): 183–188.
- GOLDINGAY, R.L., TAYLOR, B.D. and BALL, T. 2011. Wooden poles can provide habitat connectivity for a gliding mammal. *Australian Mammalogy* **33**(1): 36–43.
- GRANT, J.C., NICHOLS, J.D., PELLETIER, M.-C., GLENCROSS, K. and BELL, R. 2006. Five year results from a mixed-species spacing trial with six subtropical rainforest tree species. *Forest Ecology and Management* **233**(2–3): 309–314.
- GRANT, J.C., NICHOLS, J.D., SMITH, R.G.B., BRENNAN, P. and VANCLAY, J.K. 2010. Site index prediction of *Eucalyptus dunnii* Maiden plantations with soil and site parameters in sub-tropical eastern Australia. *Australian Forestry* **73**(4): 234–245.
- HAMILTON, M.G., RAYMOND, C.A. and POTTS, B.M. 2008. The genetic correlation between air-dried density and basic density in *Eucalyptus nitens* wood cores. *Silvae Genetica* **57**(4–5): 210–212.
- HAMILTON, M.G., RAYMOND, C.A., HARWOOD, C.E. and POTTS, B.M. 2009. Genetic variation in *Eucalyptus nitens* pulpwood and wood shrinkage traits. *Tree Genetics and Genomes* **5**(2): 307–316.
- HANSON, D.E., NICHOLS, J.D. and STEELE, O.C. 2005. Propagation methods for some important Samoan timber tree species. *Journal of Tropical Forest Science* **17**(2): 315–318.
- HARRIS, J.M., GYNTHNER, I.C., EYRE, T.J., GOLDINGAY, R.L. and MATHIESON, M.T. 2007. Distribution, habitat and conservation status of the Eastern Pygmy-possum *Cercartetus nanus* in Queensland. *Australian Zoologist* **34**(2): 209–221.

- HAYES, I.F. and GOLDINGAY, R.L. 2009. Use of fauna road-crossing structures in north-eastern New South Wales. *Australian Mammalogy* **31**(2): 89–95.
- IFTEKHAR, M.S. and SAENGER, P. 2008. Vegetation dynamics in the Bangladesh Sundarbans mangroves: A review of forest inventories. *Wetlands Ecology and Management* **16**(4): 291–312.
- INNES, J.L. 2010. Professional education in forestry. Chapter 5 in *Commonwealth Forests 2010*. Commonwealth Forestry Association. 185 p.
- JACOBSON, M.G., HAM, C. and ACKEMAN, P.A. 2008. Forest management educational needs in South African forestry companies. *Southern Forests* **70**(3): 269–274.
- JAGO, L.C.F. and BOYD, W.E. 2003. A GIS atlas of the fossil pollen and modern records of *Ficus* and related species for Island Southeast Asia, Australasia and the Western Pacific. *Australian Geographical Studies* **41**(1): 58–72.
- JAGO, L.C.F. and BOYD, W.E. 2005. How a wet tropical rainforest copes with repeated volcanic destruction. *Quaternary Research* **64**(3): 399–406.
- JOHNSON, I.G., COTTERILL, I.M., RAYMOND, C.A., HENSON, M. 2006. Half a century of *Pinus radiata* tree improvement in New South Wales. *New Zealand Journal of Forestry* **52**(4): 7–13.
- JONES, M.E., STOKOE, R.L., CROSS, M.J., SCOTT, L.J., MAGUIRE, T.L. and SHEPHERD, M. 2001. Isolation of microsatellite loci from spotted gum (*Corymbia variegata*), and cross-species amplification in *Corymbia* and *Eucalyptus*. *Molecular Ecology Notes* **1**(4): 276–278.
- JONES, M.E., SHEPHERD, M., HENRY, R.J. and DELVES, A. 2006. Chloroplast DNA variation and population structure in the widespread forest tree, *Eucalyptus grandis*. *Conservation Genetics* **7**(5): 691–703.
- JONES, M.E., SHEPHERD, M., HENRY, R. and DELVES, A. 2008. Pollen flow in *Eucalyptus grandis* determined by paternity analysis using microsatellite markers. *Tree Genetics and Genomes* **4**(1): 37–47.
- KARIUKI, M., KOOYMAN, R.M., SMITH, R.G.B., WARDELL-JOHNSON, G. and VANCLAY, J.K. 2006a. Regeneration changes in tree species abundance, diversity and structure in logged and unlogged subtropical rainforest over a 36-year period. *Forest Ecology and Management* **236**(2–3): 162–176.
- KARIUKI, M., ROLFE, M., SMITH, R.G.B., VANCLAY, J.K. and KOOYMAN, R.M. 2006b. Diameter growth performance varies with species functional-group and habitat characteristics in subtropical rainforests. *Forest Ecology and Management* **225**(1–3): 1–14.
- KELLY, J., JOSE, S., NICHOLS, J.D. and BRISTOW, M. 2009. Growth and physiological response of six Australian rainforest tree species to a light gradient. *Forest Ecology and Management* **257**(1): 287–293.
- LAN, J., RAYMOND, C.A., SMITH, H.J., THOMAS, D.S., HENSON, M., CARNEGIE, A.J. and NICHOLS, J.D. 2011. Variation in growth and Quambalaria tolerance of clones of *Corymbia citriodora* subsp. *variegata* planted on four contrasting sites in north-eastern NSW. *Australian Forestry* **74**(3): 205–217.
- LE, S., NOCK, C., HENSON, M. and SHEPHERD, M. 2009. Genetic differentiation among and within three red mahoganies (series Annulares), *Eucalyptus pellita*, *E. resinifera* and *E. scias* (Myrtaceae). *Australian Systematic Botany* **22**(5): 332–343.
- LESLIE, A.D., WILSON, E.R., STARR C.B. 2006. The current state of professional forestry education in the United Kingdom. *International Forestry Review* **8**(3): 339–349.
- LEYS, A.J. and VANCLAY, J.K. 2010. Land-use change conflict arising from plantation forestry expansion: Views across Australian fence-lines. *International Forestry Review* **12**(3): 256–269.
- LEYS, A.J. and VANCLAY, J.K. 2011a. Social learning: A knowledge and capacity building approach for adaptive co-management of contested landscapes. *Land Use Policy* **28**(3): 574–584.
- LEYS, A.J. and VANCLAY, J.K. 2011b. Stakeholder engagement in social learning to resolve controversies over land-use change to plantation forestry. *Regional Environmental Change* **11**(1): 175–190.
- LISTYANTO, T., GLENCROSS, K., NICHOLS, J.D., SCHOER, L. and HARWOOD, C. 2010. Performance of eight eucalypt species and interspecific hybrid combinations at three sites in northern New South Wales, Australia. *Australian Forestry* **73**(1): 47–52.
- LLOYD, A., LAW, B. and GOLDINGAY, R. 2006. Bat activity on riparian zones and upper slopes in Australian timber production forests and the effectiveness of riparian buffers. *Biological Conservation* **129**(2): 207–220.
- LLOYD, D. 2008. South East SA Forest Water Policy. In *Forestry for a Better Future: Climate, Commerce and Communities*, Proceedings of Australian Forest Growers National Conference, p. 27–31.
- LLOYD, D., VAN NIMWEGEN, P. and BOYD, W.E. 2005. Letting indigenous people talk about their country: A case study of cross-cultural (Mis)communication in an environmental management planning process. *Geographical Research* **43**(4): 406–416.
- LLOYD, D., BOYD, B. and DEN EXTER, K. 2010. Mind mapping as an interactive tool for engaging complex geographical issues. *New Zealand Geographer* **66**(3): 181–188.
- MAGUIRE, T.L. and SAENGER, P. 2000. The taxonomic relationships within the genus *Excoecaria* L. (Euphorbiaceae) based on leaf morphology and rDNA sequence data. *Wetlands Ecology and Management* **8**(1): 19–28.
- MAGUIRE, T.L., EDWARDS, K.J., SAENGER, P. and HENRY, R. 2000a. Characterisation and analysis of microsatellite loci in a mangrove species, *Avicennia marina* (Forsk.) Vierh. (Avicenniaceae). *Theoretical and Applied Genetics* **101**(1–2): 279–285.
- MAGUIRE, T.L., SAENGER, P., BAVERSTOCK, P. and HENRY, R. 2000b. Microsatellite analysis of genetic structure in the mangrove species *Avicennia marina* (Forsk.) Vierh. (Avicenniaceae). *Molecular Ecology* **9**(11): 1853–1862.
- MAGUIRE, T.L., PEAKALL, R. and SAENGER, P. 2002. Comparative analysis of genetic diversity in the mangrove

- species *Avicennia marina* (Forsk.) Vierh. (Avicenniaceae) detected by AFLPs and SSRs. *Theoretical and Applied Genetics* **104**(2–3): 388–398.
- MERTENS, B., KAIMOWITZ, D., PUNTODEWO, A., VANCLAY, J. and MENDEZ, P. 2004. Modeling deforestation at distinct geographic scales and time periods in Santa Cruz, Bolivia. *International Regional Science Review* **27**(3): 271–296.
- MUNYASI, J.W. and NICHOLS, J.D. 2007. Communities and contrasting values attached to pasture weeds: The case of the Maasai and Kamba peoples in south-east Kenyan rangelands. *Agroforestry Systems* **70**(3): 185–195.
- MURPHY, T.N., HENSON, M. and VANCLAY, J.K. 2005. Growth stress in *Eucalyptus dunnii*. *Australian Forestry* **68**(2): 144–149.
- NEBEL, G., KVIST, L.P., VANCLAY, J.K., CHRISTENSEN, H., FREITAS, L. and RUIZ, J. 2001a. Structure and floristic composition of flood plain forests in the Peruvian Amazon I. Overstorey. *Forest Ecology and Management* **150**(1–2): 27–57.
- NEBEL, G., DRAGSTED, J. and VANCLAY, J.K. 2001b. Structure and floristic composition of flood plain forests in the Peruvian Amazon II. The understorey of restinga forests. *Forest Ecology and Management* **150**(1–2): 59–77.
- NEBEL, G., KVIST, L.P., VANCLAY, J.K. and VIDAURRE, H. 2001c. Forest dynamics in flood plain forests in the Peruvian Amazon: Effects of disturbance and implications for management. *Forest Ecology and Management* **150**(1–2): 79–92.
- NEBEL, G., DRAGSTED, J., SIMONSEN, T.R. and VANCLAY, J.K. 2001d. The Amazon flood plain forest tree *Maquira coriacea* (Karsten) C.C. Berg: Aspects of ecology and management. *Forest Ecology and Management* **150**(1–2): 103–113.
- NICHOLS, J.D. and CARPENTER, F.L. 2006. Interplanting *Inga edulis* yields nitrogen benefits to *Terminalia Amazonia*. *Forest Ecology and Management* **233**(2–3): 344–351.
- NICHOLS, J.D., AGYEMAN, V.K., AGURGO, F.B., WAGNER, M.R. and COBBINAH, J.R. 1999a. Patterns of seedling survival in the tropical African tree *Milicia excelsa*. *Journal of Tropical Ecology* **15**(4): 451–461.
- NICHOLS, J.D., OFORI, D.A., WAGNER, M.R., BOSU, P. and COBBINAH, J.R. 1999b. Survival, growth and gall formation by *Phytolyma lata* on *Milicia excelsa* established in mixed-species tropical plantations in Ghana. *Agricultural and Forest Entomology* **1**(2): 137–141.
- NICHOLS, J.D., ROSEMEYER, M.E., CARPENTER, F.L. and KETTLER, J. 2001. Intercropping legume trees with native timber trees rapidly restores cover to eroded tropical pasture without fertilization. *Forest Ecology and Management* **152**(1–3): 195–209.
- NICHOLS, J.D., BRISTOW, M. and VANCLAY, J.K. 2006. Mixed-species plantations: Prospects and challenges. *Forest Ecology and Management* **233**(2–3): 383–390.
- NICHOLS, J.D., SMITH, R.G.B., GRANT, J. and GLENCROSS, K. 2010. Subtropical eucalypt plantations in eastern Australia. *Australian Forestry* **73**(1): 53–62.
- OCHIENG, J.W., HENRY, R.J., BAVERSTOCK, P.R., STEANE, D.A. and SHEPHERD, M. 2007a. Nuclear ribosomal pseudogenes resolve a corroborated monophyly of the eucalypt genus *Corymbia* despite misleading hypotheses at functional ITS paralogs. *Molecular Phylogenetics and Evolution* **44**(2): 752–764.
- OCHIENG, J.W., STEANE, D.A., LADIGES, P.Y., BAVERSTOCK, P.R., HENRY, R.J. and SHEPHERD, M. 2007b. Microsatellites retain phylogenetic signals across genera in eucalypts (Myrtaceae). *Genetics and Molecular Biology* **30**(4): 1125–1134.
- OCHIENG, J.W., SHEPHERD, M., BAVERSTOCK, P.R., NIKLES, G., LEE, D.J. and HENRY, R.J. 2008. Genetic variation within two sympatric spotted gum eucalypts exceeds between taxa variation. *Silvae Genetica* **57**(4–5): 249–256.
- OCHIENG, J.W., SHEPHERD, M., BAVERSTOCK, P.R., NIKLES, G., LEE, D.J. and HENRY, R.J. 2010. Two sympatric spotted gum species are molecularly homogeneous. *Conservation Genetics* **11**(1): 45–56.
- PALMER, G. and VANCLAY, J. 2009. Resource inventory for conversion modelling. USDA Forest Service, General Technical Report PNW-GTR 791, pp. 145–150.
- PEARCE, D., PUTZ, F.E. and VANCLAY, J.K. 2003. Sustainable forestry in the tropics: Panacea or folly? *Forest Ecology and Management* **172**(2–3): 229–247.
- PELLETIER, M.-C., HENSON, M., BOYTON, S., THOMAS, D. and VANCLAY, J. 2008. Genetic variation on shrinkage properties of *Eucalyptus pilularis* assessed using increment cores and test blocks. *New Zealand Journal of Forestry Science* **38**(1): 194–210.
- PRASTYONO, DORAN, J.C., NICHOLS, J.D. and RAYMOND, C.A. 2011. Potential of clones in improving the financial benefits of essential oil production from *Melaleuca alternifolia* plantations. *Agroforestry Systems*, DOI 10.1007/s10457-011-9410-7.
- PUTZ, F.E., ZUIDEMA, P.A., PINARD, M.A., BOOT, R.G.A., SAYER, J.A., SHEIL, D., SIST, P., ELIAS, VANCLAY, J.K. 2008. Improved tropical forest management for carbon retention. *PLoS Biology* **6**(7): 1368–1369.
- RAYMOND, C.A. 2011. Genotype by environment interactions for *Pinus radiata* in New South Wales, Australia. *Tree Genetics and Genomes* **7**(4): 819–833.
- RAYMOND, C.A. and HENSON, M. 2009. Genetic variation amongst and within the native provenances of *Pinus radiata* D. Don in South-eastern Australia. 1. Growth and form to age 26 years. *Silvae Genetica* **58**(5–6): 242–252.
- RAYMOND, C.A. and JOE, B. 2007. Patterns of basic density variation for *Pinus radiata* grown in south-west slopes region of New South Wales, Australia. *New Zealand Journal of Forestry Science* **37**(1): 81–95.
- RAYMOND, C.A., JOE, B., EVANS, R. and DICKSON, R. L. 2007. Relationship between timber grade, static and dynamic modulus of elasticity, and SilviScan properties for *Pinus radiata* in New South Wales. *New Zealand Journal of Forestry Science* **37**(2): 186–196.
- RAYMOND, C.A., JOE, B., ANDERSON, D.W. and WATT, D.J. 2008. Effect of thinning on relationships between

- three measures of wood stiffness in *Pinus radiata*: Standing trees vs. logs vs. short clear specimens. *Canadian Journal of Forest Research* **38**(11): 2870–2879.
- RAYMOND, C.A., HENSON, M. and JOE, B. 2009. Genetic variation amongst and within the native provenances of *Pinus radiata* D. Don in South-eastern Australia. 2. Wood Density and Stiffness to Age 26 Years. *Silvae Genetica* **58**(4): 192–204.
- RAYMOND, C.A., THOMAS, D.S. and HENSON, M. 2010a. Predicting pulp yield and pulp productivity of *Eucalyptus dunnii* using acoustic techniques. *Australian Forestry* **73**(2): 91–97.
- RAYMOND, C.A., TIBBITS, J.F.G. and HENSON, M. 2010b. Genetic variation amongst and within the native provenances of *Pinus radiata* D. Don in south-eastern Australia. 3. Molecular and quantitative structure. *Silvae Genetica* **59**(6): 289–298.
- ROCHE, M.M. and DARGAVEL, J. 2008. Imperial ethos, dominions reality: Forestry education in New Zealand and Australia, 1910–1965. *Environment and History* **14**: 523–43.
- ROSE, P., SPECHT, A., WHELAN, M. and STUBBS, B. 2010. Riparian vegetation change on the Clarence River floodplain. *Australasian Journal of Environmental Management* **17**(4): 223–234.
- SAENGER, P. and BROOKS, L. 2008. Phenotypic leaf variation in *Avicennia marina* in tropical Australia: Can discrete subpopulations be recognised in the field? *Australian Journal of Botany* **56**(6): 487–492.
- SAENGER, P., DIN, N., JULES, P.R., SIEGFRIED, D.D., BLASCO, F. 2008. Logging activities in mangrove forests: a case study of Douala Cameroon. *African Journal of Environmental Science and Technology* **2**(2): 22–30.
- SAUNDERS, K.M., TAFFS, K.H. 2009. Palaeoecology: a tool to improve the management of Australian estuaries. *Journal of Environmental Management* **90**(8): 2730–2736.
- SCOTT, L.J., SHEPHERD, M.J., NIKLES, D.G. and HENRY, R.J. 2005. Low efficiency of pseudotestcross mapping design was consistent with limited genetic diversity and low heterozygosity in hoop pine (*Araucaria cunninghamii*, Araucariaceae). *Tree Genetics and Genomes* **1**(3): 124–134.
- SEXTON, T.R., HENRY, R.J., MCMANUS, L.J., HENSON, M., THOMAS, D.S. and SHEPHERD, M. 2010. Genetic association studies in *Eucalyptus pilularis* Smith (blackbutt). *Australian Forestry* **73**(4): 254–258.
- SHARPE, D.J. and GOLDINGAY, R.L. 2007. Home range of the Australian squirrel glider, *Petaurus norfolcensis* (Diprotodontia). *Journal of Mammalogy* **88**(6): 1515–1522.
- SHARPE, D.J. and GOLDINGAY, R.L. 2010. Population ecology of the nectar-feeding squirrel glider (*Petaurus norfolcensis*) in remnant forest in subtropical Australia. *Wildlife Research* **37**(2): 77–88.
- SHEIL, D., SALIM, A., CHAVE, J., VANCLAY, J. and HAWTHORNE, W.D. 2006. Illumination-size relationships of 109 coexisting tropical forest tree species. *Journal of Ecology* **94**(2): 494–507.
- SHEPHERD, M. and RAYMOND, C. 2010. Species differentiation and gene flow in the Blackbutts (genus *Eucalyptus* subgenus *Eucalyptus* section *Pseudophloius*). *Conservation Genetics* **11**(5): 1965–1978.
- SHEPHERD, M. and WILLIAMS, C.G. 2008. Comparative mapping among subsection *Australiae* (genus *Pinus*, family *Pinaceae*). *Genome* **51**(5): 320–331.
- SHEPHERD, M., CHAPARRO, J.X. and TEASDALE, R. 2000. Variation and inheritance of resistance to defoliation by Christmas beetles, *Anoplognathus* sp (Leach) in eucalypts. *Forest Genetics* **7**(1): 57–64.
- SHEPHERD, M., CROSS, M., DIETERS, M.J. and HENRY, R. 2002a. Branch architecture QTL for *Pinus elliotii* var. *elliottii* x *Pinus caribaea* var. *hondurensis* hybrids. *Annals of Forest Science* **59**(5–6): 617–625.
- SHEPHERD, M., CROSS, M., MAGUIRE, T.L., DIETERS, M.J., WILLIAMS, C.G. and HENRY, R.J. 2002b. Transpecific microsatellites for hard pines. *Theoretical and Applied Genetics* **104**(5): 819–827.
- SHEPHERD, M., CROSS, M., DIETERS, M.J., HARDING, K., KAIN, D. and HENRY, R. 2003a. Genetics of physical wood properties and early growth in a tropical pine hybrid. *Canadian Journal of Forest Research* **33**(10): 1923–1932.
- SHEPHERD, M., CROSS, M., DIETERS, M.J. and HENRY, R. 2003b. Genetic maps for *Pinus elliotii* var. *elliottii* and *P. caribaea* var. *hondurensis* using AFLP and microsatellite markers. *Theoretical and Applied Genetics* **106**(8): 1409–1419.
- SHEPHERD, M., MELLICK, R., TOON, P., DALE, G. and DIETERS, M. 2005. Genetic control of adventitious rooting on stem cuttings in two *Pinus elliotii* x *P. caribaea* hybrid families. *Annals of Forest Science* **62**(5): 403–412.
- SHEPHERD, M., KASEM, S., LEE, D. and HENRY, R. 2006. Construction of microsatellite linkage maps for *Corymbia*. *Silvae Genetica* **55**(4–5): 228–238.
- SHEPHERD, M., NGUYEN, L., JONES, M.E., NICHOLS, J.D. and CARPENTER, F.L. 2007a. A method for assessing arbuscular mycorrhizal fungi group distribution in tree roots by intergenic transcribed sequence variation. *Plant and Soil* **290**(1–2): 259–268.
- SHEPHERD, M., POMROY, P., DIETERS, M. and LEE, D. 2007b. Genetic control of propagation traits in a single *Corymbia torelliana* x *Corymbia variegata* family. *Canadian Journal of Forest Research* **37**(12): 2563–2574.
- SHEPHERD, M., KASEM, S., ABLETT, G., OCHIENG, J. and CRAWFORD, A. 2008a. Genetic structuring in the spotted gum complex (genus *Corymbia*, section *Politaria*). *Australian Systematic Botany* **21**(1): 15–25.
- SHEPHERD, M., KASEM, S., LEE, D.J. and HENRY, R. 2008b. Mapping species differences for adventitious rooting in a *Corymbia torelliana* x *Corymbia citriodora* subspecies *variegata* hybrid. *Tree Genetics and Genomes* **4**(4): 715–725.
- SHEPHERD, M., SEXTON, T.R., THOMAS, D., HENSON, M. and HENRY, R.J. 2010. Geographical and historical

- determinants of microsatellite variation in *Eucalyptus pilularis*. *Canadian Journal of Forest Research* **40**(6): 1051–1063.
- SHEPHERD, M., HENSON, M. and LEE, D.J. 2011. Revisiting genetic structuring in spotted gums (genus *Corymbia* section *Maculatae*) focusing on *C. maculata*, an early diverged, insular lineage. *Tree Genetics and Genomes*, doi:10.1007/s11295-011-0428-9.
- SHEUE, C.-R., YANG, Y.-P., LIU, H.-Y., CHOU, F.-S., CHANG, H.-C., SAENGER, P., MANGION, C.P., IGHMAN, G., YONG, J.W.H. and TSAI, C.-C. 2009. Reevaluating the taxonomic status of *Cerriops australis* (Rhizophoraceae) based on morphological and molecular evidence. *Botanical Studies* **50**(1): 89–100.
- SKOVSGAARD, J.P. and VANCLAY, J.K. 2008. Forest site productivity: A review of the evolution of dendrometric concepts for even-aged stands. *Forestry* **81**(1): 13–31.
- SMITH, R.G.B. and NICHOLS, J.D. 2005. Patterns of basal area increment, mortality and recruitment were related to logging intensity in subtropical rainforest in Australia over 35 years. *Forest Ecology and Management* **218**(1–3): 319–328.
- SMITH, R.G.B., NICHOLS, J.D. and VANCLAY, J.K. 2005. Dynamics of tree diversity in undisturbed and logged subtropical rainforest in Australia. *Biodiversity and Conservation* **14**(10): 2447–2463.
- SPECHT, A. and TURNER, J. 2006. Foliar nutrient concentrations in mixed-species plantations of subtropical cabinet timber species and their potential as a management tool. *Forest Ecology and Management* **233**(2–3): 324–337.
- SPECHT, A. and WEST, P.W. 2003. Estimation of biomass and sequestered carbon on farm forest plantations in northern New South Wales, Australia. *Biomass and Bioenergy* **25**(4): 363–379.
- STOKES, D.J., HEALY, T.R. and COOKE, P.J. 2010. Expansion dynamics of monospecific, temperate mangroves and sedimentation in two embayments of a barrier-enclosed lagoon, Tauranga Harbour, New Zealand. *Journal of Coastal Research* **26**(1): 113–122.
- STONE, C., CHESNUT, K., PENMAN, T. and NICHOLS, D. 2010. Waterlogging increases the infestation level of the pest psyllid *Creiis lituratus* on *Eucalyptus dunnii*. *Australian Forestry* **73**(2): 98–105.
- STREED, E., NICHOLS, J.D. and GALLATIN, K. 2006. A financial analysis of small-scale tropical reforestation with native species in Costa Rica. *Journal of Forestry* **104**(5): 276–282.
- STUBBS, B.J. 2008. Forest conservation and the reciprocal timber trade between New Zealand and New South Wales, 1880s–1920s. *Environment and History* **14**(4): 497–522.
- TAYLOR, B.D. and GOLDINGAY, R.L. 2010. Roads and wildlife: Impacts, mitigation and implications for wildlife management in Australia. *Wildlife Research* **37**(4): 320–331.
- THINLEY, C., PALMER, G., VANCLAY, J.K. and HENSON, M. 2005. Spiral and interlocking grain in *Eucalyptus dunnii*. *Holz als Roh- und Werkstoff* **63**(5): 372–379.
- TORRENCE, R., NEALL, V. and BOYD, W.E. 2009. Volcanism and historical ecology on the Willaumez Peninsula, Papua New Guinea. *Pacific Science* **63**(4): 507–535.
- TOULMIN, M.J. and RAYMOND, C.A. 2007. Developing a sampling strategy for measuring acoustic velocity in standing *Pinus radiata* using the treetap time of flight tool. *New Zealand Journal of Forestry Science* **37**(1): 96–111.
- VANCLAY, J.K. 2001. The effectiveness of parks. *Science* **293**(5532): 1007.
- VANCLAY, J.K. 2005a. Deforestation: Correlations, possible causes and some implications. *International Forestry Review* **7**(4): 278–293.
- VANCLAY, J.K. 2005b. Using a typology of tree-growers to guide forestry extension. *Annals of Tropical Research* **27**(1): 97–103.
- VANCLAY, J. 2005c. Achieving a quiet revolution in forestry education. *Australian Forest Grower* **28**(3): 25–26.
- VANCLAY, J.K. 2006a. Spatially-explicit competition indices and the analysis of mixed-species plantings with the Simile modelling environment. *Forest Ecology and Management* **233**(2–3): 295–302.
- VANCLAY, J.K. 2006b. Experiment designs to evaluate inter- and intra-specific interactions in mixed plantings of forest trees. *Forest Ecology and Management* **233**(2–3): 366–374.
- VANCLAY, J.K. 2006c. Can lessons from the Community Rainforest Reforestation Program in eastern Australia be learned? *International Forestry Review* **8**(2): 256–264.
- VANCLAY, J.K. 2007. Educating Australian foresters for the 21st century. *International Forestry Review* **9**(4): 884–891.
- VANCLAY, J.K. 2008a. Gauging the impact of journals. *Forest Ecology and Management* **256**(4): 507–509.
- VANCLAY, J.K. 2008b. Ranking forestry journals using the h-index. *Journal of Informetrics* **2**(4): 326–334.
- VANCLAY, J.K. 2009a. Managing water use from forest plantations. *Forest Ecology and Management* **257**(2): 385–389.
- VANCLAY, J.K. 2009b. Tree diameter, height and stocking in even-aged forests. *Annals of Forest Science* **66**(7): 702–7pp.
- VANCLAY, J.K. 2010a. Robust relationships for simple plantation growth models based on sparse data. *Forest Ecology and Management* **259**(5): 1050–1054.
- VANCLAY, J.K. 2010b. Hallmarks of an effective non-governmental organisation: The formation and management of Australia's Wentworth group. *Science and Public Policy* **37**(9): 719–722.
- VANCLAY, J.K. 2011a. An evaluation of the Australian Research Council's journal ranking. *Journal of Informetrics* **5**(2): 265–274.
- VANCLAY, J.K. 2011b. Future harvest: What might forest harvesting entail 25 years hence? *Scandinavian Journal of Forest Research* **26**(2): 183–186.
- VANCLAY, J.K. and NICHOLS, J.D. 2005. What would a global forest convention mean for tropical forest and for timber consumers? *Journal of Forestry* **103**(3): 120–125.

- VANCLAY, J.K. and SANDS, P.J. 2009. Calibrating the self-thinning frontier. *Forest Ecology and Management* **259**(1): 81–85.
- VANCLAY, J., KEENAN, R., GERRAND, A. and FRANKS, I. 2006. Beer-bottle tops: A simple forest management game. *International Forestry Review* **8**(4): 432–438.
- VANCLAY, J.K., BAYNES, J. and CEDAMON, E. 2008a. Site index equation for smallholder plantations of *Gmelina arborea* in Leyte Province, the Philippines. *Small-scale Forestry* **7**(1): 87–93.
- VANCLAY, J.K., HENSON, M. and PALMER, G. 2008b. Color variation and correlations in *Eucalyptus dunnii* sawnwood. *Journal of Wood Science* **54**(6): 431–435.
- VANCLAY, J.K., SHORTISS, J., AULSEBROOK, S., GILLESPIE, A.M., HOWELL, B.C., JOHANNI, R., MAHER, M.J., MITCHELL, K.M., STEWART, M.D. and YATES, J. 2011. Customer Response to Carbon Labelling of Groceries. *Journal of Consumer Policy* **34**(1): 153–160.
- WEISKITTEL, A.R., HANN, D.W., KERSHAW, J.A. and VANCLAY, J.K. 2011. *Forest Growth and Yield Modeling*. Wiley, NY, 430 p.
- WEST, P.W. 2006. *Growing Plantation Forests*. Springer, Berlin, 304 p.
- WEST, P.W. 2009. *Tree and Forest Measurement*, 2nd Edition. Springer, Berlin, 190 p.
- WEST, P.W. 2011. Potential for wider application of 3P sampling in forest inventory. *Canadian Journal of Forest Research* **41**(7): 1500–1508.
- WEST, P.W., CAWSEY, E.M., STOL, J. and FREUDENBERGER, D. 2008a. Firewood harvest from forests of the Murray-Darling Basin, Australia. Part 1: Long-term, sustainable supply available from native forests. *Biomass and Bioenergy* **32**(12): 1206–1219.
- WEST, P.W., CAWSEY, E.M., STOL, J. and FREUDENBERGER, D. 2008b. Firewood harvest from forests of the Murray-Darling Basin, Australia. Part 2: Plantation resource required to supply present demand. *Biomass and Bioenergy* **32**(12): 1220–1226.
- WIELINGA, B., RAYMOND, C.A., JAMES, R. and MATHE-SON, A.C. 2009a. Genetic parameters and genotype by environment interactions for green and basic density and stiffness of *Pinus radiata* D. Don estimated using acoustics. *Silvae Genetica* **58**(3): 112–122.
- WIELINGA, B., RAYMOND, C.A., JAMES, R. and MATHE-SON, A.C. 2009b. Effect of green density values on *Pinus radiata* stiffness estimation using a stress-wave technique. *New Zealand Journal of Forestry Science* **39**(1): 71–79.
- YOUSSEF, T. and SAENGER, P. 1998. Photosynthetic gas exchange and water use in tropical and subtropical populations of the mangrove *Aegiceras corniculatum*. *Marine and Freshwater Research* **49**(4): 329–334.