

## Major Publications

2005-2006

Publications are either directly related to CRC for Forestry research, or the research was carried out by CRC for Forestry related staff

- Archibald RD, Harper RJ, Fox JED, Silberstein RP (2006) Tree performance and root-zone salt accumulation in three dryland Australian plantations. *Agroforestry Systems* **66**, 191-204
- Baker, SC (2006) A comparison of litter beetle assemblages (Coleoptera) in mature and recently clearfelled *Eucalyptus obliqua* forest. *Australian Journal of Entomology* **45**, 130-136.
- Baker, SC, Barmuta, LA (2006) Evaluating spatial autocorrelation and depletion in pitfall-trap studies of environmental gradients. *Journal of Insect Conservation* **10**, 269-276.
- Baker, SC, Richardson, AMM, Barmuta, LA, Thomson, R (2006) Why conservation reserves should not always be concentrated in riparian areas: a study of ground-dwelling beetles in wet eucalypt forest. *Biological Conservation (in press)*.
- Barbour RC, Potts BM, Vaillancourt RE, Tibbits W (2006) Gene flow between introduced and native *Eucalyptus* species: flowering asynchrony as a barrier to F<sub>1</sub> hybridisation between exotic *E. nitens* and native Tasmanian *Symphyomyrtus* species. *Forest Ecology and Management (in press)*.
- Barbour RC, Potts BM, Vaillancourt, RE (2006) Gene flow between introduced and native *Eucalyptus*: early-age selection limits invasive capacity of exotic *E. ovata x nitens* F<sub>1</sub> hybrids. *Forest Ecology and Management (in press)*.
- Barbour RC, Potts BM, Vaillancourt RE (2006) Gene flow between introduced and native *Eucalyptus* species: morphological analysis of tri-species and backcross hybrids involving *E. nitens*. *Silvae Genetica (in press)*.
- Bren L, Lane P, McGuire D (2006) An empirical, comparative model of annual water yield changes associated with pine plantations in southern Australia. *Australian Forestry (in press)*.
- Burgess TI, Sakalidis ML, Hardy GE (2006) Gene flow of the canker pathogen *Botryosphaeria australis* between *Eucalyptus globulus* plantations and native eucalypt forests in Western Australia. *Austral Ecology* **31**, 559-566.
- Comerford NB, Cropper Jr WP, Li H, Smethurst PJ, Van Rees KCJ, Jokela EJ, Adégbidi H, Barros NF (2006) Soil supply and nutrient demand (SSAND): a general nutrient uptake model and an example of its application to forest management. *Canadian Journal of Soil Research* **86**, 665-673.
- Costa e Silva J, Potts BM, Dukowski G (2006) Genotype by environment interaction for growth of *Eucalyptus globulus* in Australia. *Tree Genetics and Genomes* **2**, 61-75.
- Chuter AE, Jordan GJ, Dalton PJ, Wapstra M (2006) Spore germination and early gametophyte development of the soft tree fern *Dicksonia antarctica*. *Tasforests* **17 (in press)**.

- Davies PE, Cook LSJ, McIntosh PD, Munks SA (2005) Changes in stream biota along a gradient of logging disturbance, 15 years after logging at Ben Nevis, Tasmania. *Forest Ecology and Management* **219**, 132-148.
- Davies PE, Cook LSJ, Munks SA, Meggs J (2005) *Astacopsis gouldi* Clark: habitat characteristics and relative abundance of juveniles. *Tasforests* **16**, 1-18.
- Davies PE, McIntosh PD, Wapstra M, Bunce SEH, Cook LSJ, French B, Munks SA (2005) Changes to headwater stream morphology, habitats and riparian vegetation recorded 15 years after pre-code forest clearfelling in upland granite terrain, Tasmania, Australia. *Forest Ecology and Management* **217**, 331- 350.
- Freeman J, Potts BM, Shepherd M, Vaillancourt RE (2006) Parental and consensus linkage maps of *Eucalyptus globulus* using AFLP and microsatellite markers. *Silvae Genetica* (in press).
- Gates GM, Ratkowsky DA, Grove SJ (2005) A comparison of macrofungi in young silvicultural regeneration and mature forest at the Warra Long Term Ecological Research Site in the Southern Forests of Tasmania. *Tasforests* **16**, 127-152.
- Glen M, Smith A, Langrell, SRH, Mohammed CL (2006) Nested PCR detection of *Mycosphaerella* species in leaf disease of *Eucalyptus* plantations. *Phytopathology* (in press).
- Harper RJ, Smettem KRJ, Tomlinson RJ (2005) Using soil and climatic data to estimate the performance of trees, carbon sequestration and recharge potential at the catchment scale. *Australian Journal of Experimental Agriculture* **45**, 1389-1401.
- Hopkins AJM, Harrison KS, Grove SJ, Wardlaw TJ, Mohammed CL (2005) Wood decay fungi and beetle assemblages associated with living *Eucalyptus obliqua* trees: early results from studies at the Warra Long Term Ecological Research Site, Tasmania. *Tasforests* **16**, 111-126.
- Hunt MA, Battaglia M, Davidson N, Unwin GL (2006) Competition between plantation *Eucalyptus nitens* and *Acacia dealbata* weeds in north-eastern Tasmania. *Forest Ecology and Management* (in press).
- Hunt MA, Murray KE, Battaglia M, Mathers NJ (2006) Determination of specific leaf area of some commercially useful sub-tropical hardwood species. *Australian Forestry* (in press).
- Jones TH, Steane DA, Jones RC, Pilbeam D, Vaillancourt RE, Potts BM (2006) Genetic diversity in the Australian National *Eucalyptus globulus* breeding population. *Forest Ecology and Management* (in press).
- Lane PNJ, Sheridan PJ, Noske PJ (2006) Changes in sediment loads and discharge from small mountain catchments following wildfire in south eastern Australia. *Journal of Hydrology* (in press).
- Lauck B, Swain R, Bashford R (2005) Seasonal activity patterns of the frog, *Crinia signifera* (Anura: Myobatrachidae), in southern Tasmania, Australia. *Papers and Proceedings of the Royal Society of Tasmania* **139**, 29-32.
- Li, Y Gregory W, Dutkowski GW, Apiolaza LA, Pilbeam DJ, Costa e Silva J, Potts BM (2005) The genetic architecture of a *Eucalyptus globulus* full-sib breeding population in Australia. *Forest Genetics* (in press).
- Loney PE, McArthur C, Sanson G, Davies NW, Close DC, Jordan GJ (2006) How do soil nutrients affect within-plant patterns of herbivory in seedlings of *Eucalyptus nitens*? *Oecologia* (in press).

- Loney PE, McArthur C, Potts BM, Jordan GJ (2006) How does ontogeny in a *Eucalyptus* species affect patterns of herbivory by brushtail possums? *Functional Ecology* (in press).
- McKinnon GE, Potts BM, Steane DA, Vaillancourt RE (2005) Population and phylogenetic analysis of the cinnamoyl coA reductase gene in *Eucalyptus globulus* Labill. (Myrtaceae). *Australian Journal of Botany* **53** (8), 827-838.
- Medhurst JL, Pinkard EA, Beadle CL, Worledge D (2006) Increases in photosynthetic capacity of plantation-grown *Acacia melanoxylon* after form pruning. *Forest Ecology and Management* (in press).
- Milgate AW, Potts BM, Joyce K, Mohammed CL, Vaillancourt RE (2005) Genetic variation in *Eucalyptus globulus* for susceptibility to *Mycosphaerella nubilosa* and its association with tree growth. *Australasian Plant Pathology* **34**, 11-18.
- Milgate AW, Vaillancourt RE, Mohammed CL, Powell M, Potts BM (2005) Genetic structure of a *Mycosphaerella cryptica* population. *Australasian Plant Pathology* **34**, 345-354.
- Miller AM, McArthur C, Smethurst PJ (2006) Characteristics influencing browsing of focal plants under conditions of patch choice by a generalist mammalian herbivore. *Oecologia* (in press).
- Miller AM, McArthur C, Smethurst PJ (2006) Characteristics of tree seedlings and neighbouring vegetation have an additive influence on browsing by generalist herbivores. *Forest Ecology and Management* **228**, 197-205.
- Miller AM, McArthur C, Smethurst PJ (2006) Effects of within-patch characteristics on the vulnerability of a plant to herbivory. *Oikos* (in press).
- Miller AM, McArthur C, Smethurst PJ (2006) Preferences of two mammalian herbivores for potential cover crops in plantation forestry. *Australian Forestry* **69**, 114-121.
- Myburg Z, Potts BM, Marques CMP, Kirst M, Gion J-M, Grattapaglia D, Grima-Pettenati J (2006) Genome mapping and molecular breeding in *Eucalyptus*: molecular domestication of a major fibre crop. In 'Genome Mapping & Molecular Breeding. Vol. 6: Forest Trees'. (Ed C Kole) (Springer: Heidelberg, Berlin, New York, Tokyo) (in press).
- O'Grady AP, Worledge D, Battaglia M (2005) Above and below ground relationships, with particular reference to fine roots, in a young *Eucalyptus globulus* stand in southern Tasmania. *Trees* (in press).
- O'Grady AP, Worledge D, Battaglia M (2005) Temporal and spatial changes in fine root distributions in a young *Eucalyptus globulus* stand in southern Tasmania. *Forest Ecology and Management* **214**, 373-383.
- Pietrzykowski EA, Stone C, Pinkard EA, Mohammed CL (2006) Effects of *Mycosphaerella* leaf disease on spectral reflectance properties of juvenile *Eucalyptus globulus* foliage. *Forest Pathology* **36**, 1-15.
- Pinkard EA, Baillie CC, Patel V, Mohammed CL (2006) Effects of fertilising with nitrogen and phosphorus on growth and crown condition of *Eucalyptus globulus* Labill. experiencing insect defoliation. *Forest Ecology and Management* **231**, 131-137.
- Pinkard EA, Gill WM, Mohammed CL (2006) Physiology and anatomy of lenticel-like structures on leaves of *Eucalyptus nitens* and *E. globulus* seedlings. *Tree Physiology* **26**, 989-999.

- Pinkard EA, Mohammed CL (2006) Photosynthesis of *Eucalyptus globulus* Labill. with *Mycosphaerella* leaf disease. *New Phytologist* **170**, 119-127.
- Pinkard EA, Patel V, Mohammed CL (2006) Chlorophyll and nitrogen determination for plantation-grown *Eucalyptus nitens* and *E. globulus* using a non-destructive meter. *Forest Ecology and Management* **223**, 211-217.
- Pinkard EA, Baillie CC, Patel V, Paterson S, Battaglia M, Smethurst PJ, Mohammed CL, Wardlaw T, Stone C (2006) Growth responses of *Eucalyptus globulus* Labill. to nitrogen application and severity, pattern and frequency of artificial defoliation. *Forest Ecology and Management* **229**, 378-387.
- Poke FS, Potts BM, Vaillancourt RE, Raymond CA (2006) Genetic parameters for lignin, extractives and decay in *Eucalyptus globulus*. *Annals of Forest Science (in press)*.
- Poke FS, Raymond CA (2006) Predicting extractives, lignin, and cellulose contents using near infrared spectroscopy on solid wood in *Eucalyptus globulus*. *Journal of Wood Chemistry and Technology* **26** (2), 187-199.
- Pracilio G, Adams ML, Smettem KRJ, Harper RJ (2006) Determination of spatial distribution patterns of clay and plant available potassium contents in surface soils at the farm scale using high resolution gamma ray spectrometry. *Plant and Soil* **282**, 67-82.
- Pryor RJ, Davidson NJ, Close DC (2006) Waterlogging duration: interspecific comparison of *Leptospermum scoparium* (Forst et Forst.f.), *Acacia melanoxylon* (R.Br.), *Nothofagus cunninghamii* (Hook.) and *Eucalyptus obliqua* (L'Herit). *Austral Ecology* **31**, 408-416.
- Rice AD (2005) The parasitoid guild of larvae of *Chrysophtharta agricola* Chapuis (Coleoptera: Chrysomelidae) in Tasmania, with notes on biology and a description of a new genus and species of tachinid fly. *Australian Journal of Entomology* **44**, 400-408.
- Robinson N, Harper RJ, Smettem KRJ (2006) Soil water depletion by *Eucalyptus* spp. tree belts integrated into dryland agricultural systems. *Plant and Soil (in press)*.
- Schirmer J (2006) Plantations and social conflict: exploring the differences between small-scale and large-scale plantation forestry. In 'Small-scale forestry and rural development: the intersection of ecosystems, economics and society. Proceedings of IUFRO 3.08 Conference'. (Galway-Mayo Institute of Technology: COFORD, Dublin) 18-23 June 2006.
- Short MW, Schmidt S, Steinbauer MJ (2006) A key to some genera of Australian large nocturnal *Ichneumonidae* (Hymenoptera), including flight periodicities and influence of moon phase on light trap catches. *The Australian Entomologist* **33**, 49-55.
- Smettem KRJ, Harper RJ, Watanabe F (2006) Can concepts of ecological optimality provide guidance for predicting the performance of replanted perennial vegetation in dryland areas? *Journal of Arid Land Studies (in press)*.
- Smettem KRJ, Pracilio G, Oliver YM and Harper RJ (2005) Data availability and scale in hydrologic applications. In 'Development of Pedotransfer Functions in Soil Hydrology, Developments in Soil Science Vol. 30' (Eds Y Pachepsky and WJ Rawls). pp. 253-271.
- Smith AH, Hunter G, Pinkard EA, Wingfield M, Mohammed CL (2006) Barrier-zone formation and its association with resistance of juvenile *Eucalyptus nitens* leaves to *Mycosphaerella* Leaf Disease. *Australasian Plant Pathology (in press)*.

- Smith AH, Pinkard EA, Stone C, Battaglia M, Mohammed CL (2006) Precision and accuracy of pest and pathogen damage assessment in young eucalypt plantations. *Environmental Monitoring and Assessment* **111**, 243-256.
- Steane DA, Conod N, Jones RC, Vaillancourt RE, Potts BM (2006) A comparative analysis of population structure of a forest tree, *Eucalyptus globulus* (Myrtaceae), using microsatellite markers and quantitative traits. *Tree Genetics and Genomes* **2**, 30-38.
- Steinbauer MJ (2006) Re-collection and tentative host record for *Hygia (Australocolpura) sandracine* Brailovsky (Hemiptera: Coreidae, Colpurini). *The Australian Entomologist* **33**, 23-25.
- Steinbauer MJ (2005) How does host abundance affect oviposition and fecundity of *Mnesampela privata* (Lepidoptera: Geometridae)? *Environmental Entomology* **34**, 281-291.
- Steinbauer MJ, Short MW, Schmidt S (2006) The influence of architectural and vegetational complexity in eucalypt plantations on communities of native wasp parasitoids: towards silviculture for sustainable pest management. *Forest Ecology and Management (in press)*.
- Steinbauer MJ, Weir TA (2006) Summer activity patterns of nocturnal *Scarabaeoidea (Coleoptera)* of the southern tablelands of New South Wales. *Australian Journal of Entomology (in press)*.
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- Wapstra M, Adamczewski K, Hovenden M, Duncan F, French B (2005) Effects of forest management practices on a localised Tasmanian endemic plant, the trailing riceflower *Pimelea filiformis* Hook.f. (Thymelaeaceae). *Australian Forestry* **68**, 211-220.
- Wapstra M, French B, Davies N, O'Reilly-Wapstra J, Peters D (2005) A bright light of the dark forest floor: observations of the fairy lanterns *Thismia rodwayi* F. Muell. (Burmanniaceae) in Tasmanian forests. *The Tasmanian Naturalist* **127**, 2-18.
- Whitham TG, Bailey JK, Schweitzer JA, Shuster SM, Bangert RK, LeRoy CJ, Lonsdorf E, Allan GJ, DiFazio SP, Potts BM, Fischer DG, Gehring CA, Lindroth RL, Marks J, Har SC, Wooley SC, Wimp GM (2006) Community and ecosystem genetics: a framework for integrating from genes to ecosystems. *Nature Reviews Genetics* **7**, 510-523.
- Wiseman D, Hall MF, Baillie CC, Smethurst PJ, Pinkard EA, Wardlaw T, Beadle CL, Mohammed C (2006) The effects of tree nutrition on tree attributes and decay from pruning in *Eucalyptus nitens* plantations. *Forest Ecology and Management (in press)*.
- Wiseman D, Smethurst P, Pinkard EA, Wardlaw T, Beadle C, Hall M, Baillie C, Mohammed CL (2006) Pruning and fertiliser effects on branch size and decay in two *Eucalyptus nitens* plantations. *Forest Ecology and Management* **225** (1-3), 123-133.