

Anna Richards

Personal Details

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Employment History

Special fields of competence:

Experience in **Plant ecophysiology** laboratory and field techniques specifically: gas exchange and leaf fluorescence, field-based sensors and loggers, pressure bombs, forest inventory techniques, plant enzyme extraction and tissue nutrient analysis, leaf isotope analysis, isozyme tests for plant genetic variation; **Soil science** laboratory and field techniques specifically: soil carbon and isotopic analysis, gas chromatography, soil nutrient extraction and analysis procedures, soil physical fractionation, NMR (nuclear magnetic resonance); Ecosystem process **modelling** of nutrient cycles and climate; University **teaching**.

July 2002 – June 2007

Position: **PhD (research), School of Integrative Biology, University of Queensland**

Title: Carbon sequestration in subtropical native tree plantations in Australia

Objectives: (1) Determine carbon sequestration into different soil and plant carbon pools using isotopic, soil fractionation and modeling techniques in native rainforest, hoop pine and pasture land uses in south-east QLD.

(2) Study differences in phenology (including growth and photosynthesis, leaf turnover, water use, nitrogen allocation) of three key rainforest trees in native farm forestry plantations in south-east QLD. This information is used to model species' interactions in order to determine optimum plantation design to maximize above-ground carbon sequestration in multi-species plantations.

April - October 2005

Position: **Forestry Teacher, Vietnam Forestry University & Forest Research Centre (North Vietnam)**

Duties: Knowledge transfer and capacity building in forest carbon measurement and modeling techniques for university lecturers and forestry workers

Position funded through AUSAid and ACIAR (Australian Centre for International Agricultural research). Undertook extensive fieldwork in native tree plantations owned by local farmers. Trained forestry workers with practical skills in soil and leaf sampling for nutrient analysis. Liaised with landowners, authorities and aid agencies. Improved forestry teaching capacity in the area of forest carbon models and developed a manual of techniques for the Vietnam Forestry University library.

January 2003 – present

Company: **Trainee lecturer, University of Queensland**

Duties: Presentation of lectures to undergraduate students in second and third year plant physiology and ecology courses. Supervision of masters, honours and third year research project students in fields such as forest ecology, plant physiology and ethno botany. This involved assistance with project design and implementation, statistical analyses and correction of draft reports.

January 2000 – present

Company: Tutor, University of Queensland

Duties: Qualified tutor for first, second and third year ecology and plant physiology subjects (Groups of 12-20 students). Tasks included class preparation and course design, marking, student supervision and informal teaching.

February – May 2001

Company: Fire ant control officer, QLD Department of Primary industries, Brisbane

Duties: Organized and led a team of 6 people in pest monitoring of houses in the south Brisbane area. Liaised with homeowners in infected areas.

February – May 2001

Company: Research Assistant, QLD Department of Primary industries, Brisbane

Duties: Assisted with physiological measurements of various turf grass species under the supervision of Peter Broomhall, turf research group, DPI Redlands Research Station.

Other employment

2002: Retail sales assistant at Paddy Pallin, Brisbane

2001-2002: Front Desk Clerk for Putnam Station Hotel, Silver Star Mountain Resort, Canada

2000-2001: Waitress at the Bali Grill restaurant, Brisbane

2000-Present: Community Work at Oxfam International, Norman Park Bush Care and Queensland Conservation Council

Education

2003-2006	Graduate Certificate in Higher Education concurrent with PhD research, University of Queensland
1997-2000	Bachelor of Science Honours (Botany) Class I, University of Queensland

Academic Awards

- University Medal
- Best Student oral presentation Ecofizz biennial conference 2005
- Best Poster presentation Greenhouse Accounting CRC annual science meeting 2004
- D.A. Herbert Prize (1999) for the highest G.P.A in botany
- BACS faculty commendations for high achievement (1997,1998)
- Biochemistry Alumni Prize (1998) for highest G.P.A in biochemistry (second year)
- Publication of honors thesis results in The Australian, Cairns Post, QLD University News, ABC radio and Totally Wild

Publications

- **Richards A.E.**, Dalal, R., and Schmidt S. (2007) Soil Carbon Turnover in Native Subtropical Tree Plantations. *Soil Biology and Biochemistry* 39: 2078-2090.
- Shapcott A., **Richards A.E.**, and Playford J. (in review) A comparison of the population demography and genetic diversity between three endangered rainforest species restricted to Cape Tribulation, Australia, and three more widespread congeneric species. *Plant Species Biology*.
- **Richards A.E.**, Shapcott A., Playford J., Morrison B., Critchley C., and Schmidt S. (2003) Physiological profiles of restricted endemic plants and their widespread congeners in the North Queensland Wet Tropics, Australia. *Biological Conservation* 111:41-52.
- **Richards A.E.**, and Schmidt S. (2001) Rarity in plants. Situating the Environment, 2001 Conference Proceedings, The University of Queensland, Australia.

Other Training and Skills

- Proficient in the use of Microsoft software (Word, Excel, Access, PowerPoint, Outlook), Statistica, SPSS, Microcal Origin, Endnote, Century 4 modeling environment
- Senior First Aid Certificate (2004)
- Basic knowledge of Vietnamese, Portuguese and Spanish
- “C” class manual driver’s license

Professional Associations

Member, Australian Society of Plant Scientists (ASPS)

Hobbies / Interests

Cycling, mountain biking, hiking, back country skiing, scuba diving, music performance (flute), bush care/regeneration and traveling.

References available upon request