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EDUCATION

2015 Ph.D., La Trobe University

Invader-invader mutualism facilitates secondary invasion in rainforest on Christmas Island

2009 B. Conservation Biology & Ecology (Hons), La Trobe University

*Plant community changes associated with *Leptospermum laevigatum* invasion and senescence on the Yanakie Isthmus, Wilsons Promontory*

Majors: Botany, Ecology and Applied Conservation

PUBLICATIONS

7. O'Loughlin, T., **O'Loughlin, L.S.** & Clarke, M.F. (2016) No short-term change in avian assemblage following removal of yellow-throated miner (*Manorina flavigula*) colonies. *Ecological Management and Restoration* [in press].
6. **O'Loughlin, L.S.** & Green, P.T. (2016) Habitat augmentation drives secondary invasion: an experimental approach to determine the mechanism of invasion success. *Ecology* **97**(9), 2458-2469.
5. **O'Loughlin, L.S.** & Green, P.T. (2015) Invader-invader mutualism influences land snail community composition and alters invasion success of alien species in tropical rainforest. *Biological Invasions* **17**(9), 2659-2674.
4. **O'Loughlin, L.S.**, Green, P.T. & Morgan, J.W. (2015) The rise and fall of *Leptospermum laevigatum*: plant community change associated with the invasion and senescence of a range-expanding native species. *Applied Vegetation Science* **18**(2), 323-331.
3. O'Loughlin, T., **O'Loughlin, L.S.** & Clarke, M.F. (2014) Influence of the yellow-throated miner (*Manorina flavigula*) on bird communities and tree health in a fragmented landscape. *Wildlife Research* **41**(6), 537-544.
2. **O'Loughlin, L.S.**, Green, P.T. & Morgan, J.W. (2014) What potential is there for regeneration of native species from the soil seed bank in Coast Tea Tree-dominated scrub? *Ecological Management and Restoration* **15**(1), 80-83.
1. **Geddes, L.S.**, Lunt, I.D., Smallbone, L. & Morgan, J.W. (2011) Old field colonization by native trees and shrubs following land use change: could this be Victoria's largest example of landscape restoration? *Ecological Management and Restoration* **12**(1), 31-36

Publications in review and preparation

- O'Loughlin, L.S. & Green, P.T. (in review) Defining 'secondary invasion' of ecosystems through the direct and indirect effects of primary invaders on the recipient community. *Global Ecology and Biogeography*
- O'Loughlin, L.S. & Green, P.T. (in review) Invasive giant African land snail in rainforest – damaging invader, aesthetic atrocity, or both? *Austral Ecology*
- O'Loughlin, L.S. & Green, P.T. (in prep) Palatability of common native rainforest plants to the invasive giant African land snail on Christmas Island. *Biotropica*
- O'Loughlin, L.S., Detto, T., Maple, D. J., O'Dowd, D. J. & Green, P. T. (in prep) A novel method for determining the relative strength of multiple ant-scale mutualisms. *Myrmecological News*

CONFERENCE PRESENTATIONS

- 2015 Ecological Society of Australia Annual Conference, Adelaide, AU**
Secondary invasion on Christmas Island: a definition and demonstration of the concept:
Spoken presentation
- 2015 Association for Tropical Biological Conservation Annual Conference, Honolulu, USA**
Invasive giant African land snails (Achatina fulica) have little to no impact in rainforest on an oceanic island: Spoken presentation
- 2014 Ecological Society of Australia Annual Conference, Alice Springs, AU**
Habitat augmentation drives secondary invasion: an experimental approach to determining the mechanism of invasion success: Spoken presentation
- 2013 ECOTAS, Auckland, NZ**
Invasive giant African land snails in rainforest on Christmas Island, Indian Ocean: little to no evidence of impact: Speed Talk
- 2013 INTECOL, London, UK**
Highlighting 'secondary invasion' as an important concept when considering the determinants of invasion success: Spoken presentation
- 2012 Ecological Society of Australia Annual Conference, Melbourne, AU**
Invader-invader mutualism influences entry and establishment of other alien species in rainforest on Christmas Island: Spoken presentation
- 2010 Ecological Society of Australia Annual Conference, Canberra, AU**
The rise and fall of Leptospermum laevigatum: plant community change associated with the invasion and senescence of a range-expanding species: Spoken presentation.
- 2007 Ecological Society of Australia Annual Conference, Perth, AU**
A test of the Intermediate Disturbance Hypothesis: the effect of scale on the response of species richness to disturbance by fire in dry heathland. Poster presentation.

OTHER RESEARCH EXPERIENCE

- 2016- Yellow Crazy Ant Biocontrol Project**, La Trobe University / Parks Australia *[current]*
Research Assistant and on-going collaborator
- Remote field work on Christmas Island associated with the implementation of a biocontrol program to control an EPBC listed Key Threatening Process (Yellow Crazy Ant invasion).
 - Major task is to work in collaboration with Parks Australia staff to design, establish and conduct the field study for the first experimental release of the biological control agent.
- 2013- Connell Rainforest Plot Network**, La Trobe University / LTERN *[current]*
Research Assistant and on-going collaborator
- Planning and field work associated with the re-census of the Davies Creek and O'Reillys Rainforest Dynamics Research Plots, established by Prof. Joseph H. Connell in the 1960's.
 - Major tasks involved measuring tree girths and seedling heights, species identification, field trip organization (transport, accommodation, etc.) and team management and supervision.
- 2014- Long Term Ecology Research Group**, The Australian National University
2016 Volunteer
- Ongoing assistance on many long-term biodiversity monitoring programs undertaken by Prof. David Lindenmayer and his team of Research Officers.
 - I have participated in surveys for threatened flora and fauna in Booderee National Park, across the NSW south-west slopes region, and the central highland forests of Victoria.
- 2011- Christmas Island Conservation Projects**, Parks Australia / La Trobe University
2013 Volunteer / Research Assistant
- Active involvement on Christmas Island in many research projects and conservation efforts run by other researchers and Parks Australia.
 - Included fieldwork collecting invasive species data for a biennial island-wide-survey and working with La Trobe postdoctoral researchers on a biological control project.
- 2010 Shrub Regeneration Project**, Charles Sturt University
Research Assistant
- Establishing a project investigating natural shrub regeneration following abandonment of farming practices in central Victoria (Box Ironbark country).
 - The position primarily involved site selection via the use of aerial photography and GIS layers in order to determine the age of regeneration, and extensive liaison with local and state natural resource managers.
- 2010 TERN Rainforest Research Plot**, CSIRO Atherton / La Trobe University
Field Technical Assistant
- Involved in setting up the TERN permanent 25 Ha Rainforest Research Plot at Robson Creek, near Atherton, far North Queensland.
 - Major tasks involved tagging and mapping thousands of plant seedlings within the plot as well as some species identification.

2009 Yellow-Throated Miner Impacts Project, La Trobe University

Research Assistant

- Honours project for colleague Thea O'Loughlin. Provided field assistance with bird community surveys and vegetation attribute measurements in the fragmented mallee.
- Was charged with re-analyzing data and writing manuscript drafts for publication (two papers total) after the completion of thesis.

2007- International Tundra Experiment, La Trobe University

2008 Field Technical Assistant

- Long-term project assessing the effects of Climate Change.
- One summer field season at Falls Creek on the Bogong High Plains (Victorian Alps) collecting data on plant phenology, dynamics and species identification in Alpine vegetation.
- Also included *Sphagnum* bog restoration works with Parks Victoria.

TEACHING EXPERIENCE

2016 Tutor / Lecturer (Vegetation Disturbance Management), Charles Sturt University

Key tasks of this position were 1) completion of marking for all assessment for all students, 2) assisting Subject Coordinator with development of assessments, 3) delivery of a series of lectures specific to Invasion Biology, and 4) assisting with lecture content development.

2015 Lecturer / Subject Coordinator (Conservation Biology), Charles Sturt University

Responsibilities included; updating and delivering 24 lectures introducing and detailing the broad theory and concepts behind the science and practice of species conservation, developing tutorial content, and setting and marking assessment tasks for 62 enrolled students (2nd/3rd year).

2015 Lecturer / Subject Coordinator (Understanding Science), Charles Sturt University

Responsibilities included running and delivering a 17 week 'Introduction to Science' bridging course for Diploma-level students, entering 1st year the following semester. Subject introduced the broad principles of science including objectivity, the scientific method and experimental design.

2014 3rd Year Ecology Field Trips, La Trobe University

Demonstrating students on mini-research projects (Mt. Hotham and Cape Conran) that involved formulation of hypotheses, experimental design, collection of field data and data analysis. Included assessment of literature reviews, research reports and research posters.

2014- Tutoring, La Trobe University

2015 For second-year subject 'Practice of Science' (BIO2POS). Involved running two-hour tutorials engaging and teaching students. Also involved report and exam marking.

2012 2nd Year Ecology Field Trip, La Trobe University

Demonstrating students on a field trip (Natimuk) looking at plant species composition and communities in reference to soil characteristics. Included plant identification, developing survey methods and the marking of student reports.

2008- Demonstrating, La Trobe University

2014 Running practical classes for various undergraduate biology and ecology subjects.

GRANTS / AWARDS

2016 The Quarry Life Award

Mining restoration research. Funded by Heidelberg Cement. Costs/Prize. Value = \$5,000

2014 Ecological Society of Australia Student Travel Grant

For travel to present PhD research at annual conference in Alice Springs. Value = \$500

2011- Holsworth Wildlife Endowment Fund

2014 Equipment expenses for PhD research. Value = \$7,500 annually, \$22,500 in total

2011- Australian Postgraduate Award

2014 Scholarship for living expenses for 3.5 years, PhD. Value = \$24,000 annually, \$84,000 in total

2010- Hermon Slade Foundation

2013 Operational costs for PhD research. Grant obtained by supervisor (P. Green). My role was completing reports to secure additional funds. Value = \$25,000 annually, \$75,000 in total

2010 Ecological Society of Australia Student Travel Grant

For travel to present Honours research at annual conference in Canberra. Value = \$300

2010 Visit UNSW postgraduate scheme

Flights and accommodation to discuss PhD opportunities at UNSW. Value = \$1,200

PROFESSIONAL SERVICE & MEMBERSHIPS

2008- Ecological Society of Australia (current) including the Invasive Species Research Chapter

2012- Ecological Society of America (current)

2013 British Ecological Society

2012- *Reviewer of manuscripts* for: Restoration Ecology, Journal of Vegetation Science, Austral Ecology

SCIENCE OUTREACH

2016 KAPOW! ECOLOGY Alternative Science Communication

A weekly comic strip showcasing ecological research.

Features papers synthesized as short blog articles and colourful comics.

<https://kapowecology.wordpress.com/>

<https://facebook.com/KapowEcology/>

2015 ESA 15 COMIC

Alternative approach of communicating the science and events of the 2015 ESA conference.

Received an informal prize from the Society in recognition of this novel outreach.

<https://lukeoloughlinphd.wordpress.com/esa-15-comic/>

<https://www.ecolsoc.org.au/news/2015/12/esa15-comic-con>

2014 The Science Show ABC Radio National *interview*

PhD student in the spotlight.

<http://www.abc.net.au/radionational/programs/scienceshow/exotic-ants-tips-the-balance-on-christmas-island/5822646>

2012 Einstein-A-Go-Go 3RRR Community Radio *interview*

PhD discussion and ESA conference promotion

http://www.rrr.org.au/program/einstein-a-go-go?an_page=2012-12-02

2011- Luke O'Loughlin's PhD Research

Research Blog

<http://lukeoloughlinphd.wordpress.com/>

REFEREES

LINKS TO FURTHER INFORMATION

Google Scholar Profile: <https://scholar.google.com.au/citations?user=klugXE4AAAAJ&hl=en>

ResearchGate Profile: https://www.researchgate.net/profile/Luke_Oloughlin

YouTube Channel: <https://www.youtube.com/channel/UC9f5eWOMBnfSI8A5ED6V7YQ>

Publication PDFs: <https://lukeoloughlinphd.wordpress.com/publications/>