

Martin J. Westgate

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Total publications: 29
Total citations: 685 (Google Scholar)
H-index: 13 (Google Scholar)

Qualifications and awards

2017: Next Generation Ecologist Award, Ecological Society of Australia
2013: Doctor of Philosophy in Conservation Biology & Landscape Ecology, ANU (19th July)
2006: Bachelor of Science (Honours), Flinders University
2005: Bachelor of Environmental Management, Flinders University

Employment History

2018 - Present: **Research Fellow**, Fenner School, ANU
2013 - 2017: **Postdoctoral Fellow**, Fenner School, ANU
2011 - 2012: **Course convenor** for "Biodiversity Conservation in Modified Landscapes", 3rd year and masters-level course at the Fenner School, ANU
2010 - 2011: **Research Assistant**, Fenner School, ANU

Publications

Peer-reviewed journal articles

29. NR Haddaway & **MJ Westgate** (2018) Predicting the time needed to conduct and environmental systematic review or systematic map: analysis and decision support tool. *Conservation Biology* in press.
28. LS O'Loughlin, DB Lindenmayer, MD Smith, MR Willig, AK Knapp, K Cuddington, A Hastings, CN Foster, CF Sato, **MJ Westgate** & PS Barton (2018) Surrogates underpin ecological understanding and practise. *BioScience* in press.
27. BS Scheele, S Legge, D Armstrong, P Copley, N Robinson, D Southwell, **MJ Westgate** & DB Lindenmayer (2018) How to improve threatened species management: an Australian perspective. *Journal of Environmental Management* 223: 668-674.
26. DB Lindenmayer, P Lane, **MJ Westgate**, BC Scheele, C Foster, C Sato, M Crane, D Michael, D Florance, K Ikin, PS Barton, LS O'Loughlin, N Robinson (2018) Tests of predictions associated with temporal changes in Australian bird populations. *Biological Conservation* 222: 212-221.
25. **MJ Westgate**, NR Haddaway, SH Cheng, EJ McIntosh, C Marshall & DB Lindenmayer (2018) Software support for environmental evidence synthesis. *Nature Ecology and Evolution* 2: 588-590.

24. **MJ Westgate**, C MacGregor, BC Scheele, DA Driscoll & DB Lindenmayer (2018) Effects of time since fire on frog occurrence are altered by isolation, vegetation, and fire frequency gradients. *Diversity and Distributions* 24(1): 82-91.
23. **MJ Westgate** & DB Lindenmayer (2017) The difficulties of systematic review. *Conservation Biology* 31(5): 1002-1007.
22. **MJ Westgate**, AIT Tulloch, PS Barton, JC Pierson & DB Lindenmayer (2017) Optimal taxonomic groups for biodiversity assessment: A meta-analytic approach. *Ecography* 40(4): 539-548.
21. DB Lindenmayer, C Macgregor, J Wood, **MJ Westgate**, K Ikin, C Foster, F Ford & R Zentilis (2016) Bombs, fire and biodiversity: vertebrate fauna occurrence in areas subject to military training. *Biological Conservation* 204(B): 276-283.
20. DB Lindenmayer, SG Candy, SC Banks, **MJ Westgate**, K Ikin, JC Pierson, AIT Tulloch & PS Barton (2016) Do temporal changes in vegetation structure predict changes in bird occupancy additional to time since fire? *Ecological Applications* 26(7): 2267-2279.
19. AIT Tulloch, I Chadés, Y Dujardin, **MJ Westgate**, PW Lane & DB Lindenmayer (2016) Dynamic species co-occurrence networks require dynamic biodiversity surrogates. *Ecography* 39(12): 1185-1196.
18. M Hunter Jr., **M Westgate**, P Barton, A Calhoun, J Pierson, A Tulloch, M Beger, C Branquino, T Caro, J Gross, J Heino, P Lane, C Longo, K Martin, WH McDowell, C Mellin, H Salo & D Lindenmayer (2016) Two roles for ecological surrogacy: indicator surrogates and management surrogates. *Ecological Indicators* 63: 121-125.
17. **MJ Westgate**, PS Barton, JC Pierson & DB Lindenmayer (2015) Text analysis tools for identification of emerging topics and research gaps in conservation science. *Conservation Biology* 29(6): 1606-1614.
16. **MJ Westgate**, BC Scheele, K Ikin, AM Hoefer, RM Beaty, M Evans, W Osborne, L Rayner & DA Driscoll (2015) Citizen science program shows urban areas have lower occurrence of frog species, but not accelerated declines. *PLoS ONE* 10(11): e0140973.
15. D Lindenmayer, J Pierson, P Barton, M Beger, C Branquinho, A Calhoun, T Caro, H Greig, J Gross, J Heino, M Hunter, P Lane, C Longo, K Martin, WH McDowell, C Mellin, H Salo, A Tulloch & **M Westgate** (2015) A new framework for selecting environmental surrogates. *Science of the Total Environment* 538: 1029-1038.
14. D Stojanovic, A Terauds, **MJ Westgate**, MH Webb & R Heinsohn (2015) Exploiting the richest patch has a fitness pay-off for the migratory swift parrot. *Journal of Animal Ecology* 84(5): 1194-1201.
13. A Mortelliti, **MJ Westgate**, J Stein, J Wood & DB Lindenmayer (2015) Ecological and spatial drivers of population synchrony in bird assemblages. *Basic and Applied Ecology* 16(3): 269-278.
12. PS Barton, JC Pierson, **MJ Westgate**, PW Lane & DB Lindenmayer (2015) Learning from clinical medicine to improve the use of surrogates in ecology. *Oikos* 124: 391-398.
11. DB Lindenmayer, PW Lane, **MJ Westgate**, M Crane, D Michael, S Okada & PS Barton (2014) An empirical assessment of the focal species hypothesis. *Conservation Biology* 28(6): 1594-1603.

10. PS Barton, **MJ Westgate**, PW Lane, C MacGregor & DB Lindenmayer (2014) Robustness of habitat-based surrogates of animal diversity: a multi-taxa comparison over time. *Journal of Applied Ecology* 51(5): 1434-1443.
9. A Mortelliti, **MJ Westgate**, & DB Lindenmayer (2014) Experimental evaluation shows limited influence of pine plantations on the connectivity of highly fragmented bird populations. *Journal of Applied Ecology* 51(5): 1179-1187.
8. PW Lane, DB Lindenmayer, PS Barton, W Blanchard & **MJ Westgate** (2014) Visualisation of species pairwise associations: a case study of surrogacy in bird assemblages. *Ecology and Evolution*.
7. **MJ Westgate**, PS Barton, PW Lane & DB Lindenmayer (2014) Global meta-analysis reveals low consistency of biodiversity congruence relationships. *Nature Communications* 5: 3899.
6. DA Driscoll, SC Banks, PS Barton, K Ikin, P Lentini, DB Lindenmayer, AL Smith, LE Berry, EL Burns, A Edworthy, MJ Evans, R Gibson, R Heinsohn, B Howland, G Kay, N Munro, BC Scheele, I Stirnemann, D Stojanovic, N Sweaney, NR Villasenor, & **MJ Westgate** (2014) The trajectory of dispersal research in conservation biology. Systematic review. *PLoS ONE* 9(4): e95053.
5. DB Lindenmayer, PS Barton, PW Lane, **MJ Westgate**, L McBurney, D Blair, P Gibbons & GE Likens (2014) An empirical assessment and comparison of species-based and habitat-based surrogates: a case study of forest vertebrates and large old trees. *PLoS ONE* 9(2): e89807.
4. **MJ Westgate**, GE Likens, & DB Lindenmayer (2013) Adaptive management of biological systems: A review. *Biological Conservation* 158: 128-139.
3. **MJ Westgate**, DA Driscoll & DB Lindenmayer (2012) Limited influence of stream networks on the terrestrial movements of three wetland-dependent frog species. *Biological Conservation* 153: 169-176.
2. **MJ Westgate**, DA Driscoll & DB Lindenmayer (2012) Can the intermediate disturbance hypothesis and information on species traits predict anuran responses to fire? *Oikos* 121: 1516-1524.
1. A Felton, J Fischer, DB Lindenmayer, R Montague-Drake, A Lowe, D Saunders, A Felton, W Steffen, NT Munro, K Youngentob, J Gillen, P Gibbons, JE Bruzgul, I Fazey, SJ Bond, CP Elliott, BCT Macdonald, LL Porfirio, **MJ Westgate** & M Worthy (2009) Climate change, conservation and management: an assessment of the peer-reviewed scientific journal literature. *Biodiversity and Conservation* 18: 2243-2253.

Book Chapters

- MJ Westgate** (2015) Surrogates for the distribution and trajectory of biodiversity. Chapter 2 in DB Lindenmayer, PS Barton & JC Pierson (eds) *Indicators and Surrogates of Biodiversity and Environmental Change*. CSIRO Publishing.
- DB Lindenmayer, JC Pierson, PS Barton, PL Lane & **MJ Westgate** (2015) Biodiversity surrogates. Chapter 3 in DB Lindenmayer, PS Barton & JC Pierson (eds) *Indicators and Surrogates of Biodiversity and Environmental Change*. CSIRO Publishing.
- DB Lindenmayer, JC Pierson, PS Barton, PL Lane, AIT Tulloch & **MJ Westgate** (2015) A diversity of approaches to ecological surrogates and key knowledge gaps. Chapter 19

in DB Lindenmayer, PS Barton & JC Pierson (eds) *Indicators and Surrogates of Biodiversity and Environmental Change*. CSIRO Publishing.

Conference Presentations

MJ Westgate (2017) Next Generation Ecologist Keynote Address: Mainstreaming text mining for rapid synthesis. *EcoTas: The joint conference of the Ecological Society of Australia and the New Zealand Ecological Society, Hunter Valley*.

MJ Westgate, AIT Tulloch, PS Barton, JC Pierson & DB Lindenmayer (2015) Oral Presentation: Selecting optimal taxa for ecological monitoring: A meta-analytic approach. *Ecological Society of Australia Conference, Adelaide*.

MJ Westgate, GE Likens, & DB Lindenmayer (2011) Oral Presentation: Adaptive Management of biological systems: a review. *Ecological Society of Australia Conference, Hobart*.

MJ Westgate, DA Driscoll & DB Lindenmayer (2010) Oral Presentation: Do amphibians preferentially use streamlines as terrestrial habitat? *Ecological Society of Australia Conference, Canberra*.

MJ Westgate, DA Driscoll & DB Lindenmayer (2010) Oral Presentation: Testing hypotheses relating to fire effects on an amphibian community. *International Congress on Conservation Biology, Edmonton*.

Data and software

MJ Westgate (2018) revtools: Tools to support evidence synthesis. *R package version 0.2.1* <https://cran.r-project.org/package=revtools>

MJ Westgate, AIT Tulloch, PS Barton, JC Pierson & DB Lindenmayer (2017) Data from: Optimal taxonomic groups for biodiversity assessment: A meta-analytic approach. *Ecography* 40(4): 539-548. <https://doi.org/10.5061/dryad.s1660>

AIT Tulloch, I Chades, Y Dujardin, **MJ Westgate**, PW Lane & DB Lindenmayer (2017) Data from: Dynamic species occurrence networks require dynamic biodiversity surrogates. *Ecography* <https://doi.org/10.5061/dryad.5c4d6>

MJ Westgate, BC Scheele, K Ikin, AM Hoefer, RM Beaty, M Evans, W Osborne, L Rayner & DA Driscoll (2015) Data from: Citizen science program shows urban areas have lower occurrence of frog species, but not accelerated declines. *PLOS ONE* <https://doi.org/10.5061/dryad.75s51>

D Stojanovic, A Terauds, **MJ Westgate**, MH Webb & R Heinsohn (2015) Data from: Exploiting the richest patch has a fitness pay-off for the migratory swift parrot. *Journal of Animal Ecology* <https://doi.org/10.5061/dryad.23h73>

PS Barton, **MJ Westgate**, PW Lane, C MacGregor, DB Lindenmayer (2014) Data from: Robustness of habitat-based surrogates of animal diversity: a multi-taxa comparison over time. *Journal of Applied Ecology* <https://doi.org/10.5061/dryad.s7d2d>