

PROFESSOR BRENDAN A. WINTLE

PERSONAL DETAILS

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QUALIFICATIONS

PhD Spatial Ecological Modelling
Conferred 2004, University of Melbourne

Bachelor of Forest Science (Hons)
University of Melbourne, 1990 – 1994

PROFESSIONAL SUMMARY

Research

- Director and Melbourne Lead, National Environment Science Program; Threatened Species Recovery Hub (current) ~ \$6.1M at Melbourne over 6 years.
- Assistant Dean, Research and Industry – ongoing.
- Theme leader, ARC Centre of Excellence for Environmental Decisions (current)
- Deputy Director, NERP Environmental Decisions Hub (2010-2015), Commonwealth Environment Research Facility: Applied Environmental Decision Analysis 2006 - 2010
- \$20.35M in research funding and awards including ARC Future Fellowship, ARC APD and ARF Fellowships, NERP/CERF Hubs, ARC Discovery & Linkage grants, Weeds CRC, DAFF young scientist
- 99 journal articles (*h*-index = 39 in 12 yrs; *m*-index >3), 2 international editorial boards
- Currently supervising 7 postdoctoral and 9 postgraduate researchers. Undergraduate teaching and professional training courses; ESA, CSIRO, Danish Marine Institute
- Invited speaker at international symposia (ESA, INTECOL, Place and Purpose, CSIC)
- Ongoing international, domestic, and agency collaborations and funding support
- Invited to international research working groups (NCEAS, IUCN) on climate change adaptation, optimal monitoring, species distribution modelling, conservation priorities
- Consultant to the Canadian Forest Service, Commonwealth and State Agencies, CMAs, Local Govts, NGOs

Impact

- Coordinating Lead Author of IPBES Deliverable 3c – Methodological assessment of scenarios and models of biodiversity and ecosystem services: <http://www.ipbes.net/work-programme/scenarios-and-modelling>
- Member of Victorian Biodiversity Strategy Scientific Reference Group
- Member of the Australian Government *Monitoring, Evaluation, Reporting and Improvement* (MERI) reference committee and *Regional Sustainability Planning* Expert Reference Group
- Expert advice to SEWPAC and DAFF via AGLC, AGNRM, EPBC, ERIN on environmental flows, natural heritage assessment, and EPBC Act strategic assessments
- Member FSC and Australian Forestry Standard reference committees
- Member Tasmanian Devil Scientific Advisory Committee
- Advised glider, forest owl and Mallee Fowl threatened species recovery teams
- Expert advice to Vic Government: DEWLP's Conservation Decisions Reference Group, DSE's *Montreal indicators* and *Actions for Biodiversity Conservation* programs; Parks Victoria's *Signs of Healthy Parks* program, Sustainable Waterfowl Harvesting Reference Group.

Overview

I have been privileged to have the opportunity to shape research agendas that serve the needs of society, by solving problems with policy and management relevance. In research leadership roles I have enjoyed the opportunity to guide and contribute to the research of others.

In my own research I develop methods for dealing with uncertainty in conservation decision-making. I derive satisfaction from finding simple solutions to complex problems and from developing leading-edge techniques. I've published on technical and policy issues in conservation ecology; including optimal monitoring and adaptive management, spatial prioritization, population viability analysis, occupancy and distribution modelling, Bayesian statistics, and decision theory.

2017 - ongoing	Professor Conservation Ecology, Director NESP Threatened Species Recovery Hub, Assistant Dean – Research and Industry
2011 - 2016	Associate Professor & Reader, ARC Future Fellow, Assistant Dean – Research and Industry <i>Fellowship research:</i> From prediction to adaptation: responding to rapid ecosystem shifts under climate change.
2007 - 2016	Deputy Director/Acting Director, NESP/CERF/NERP Research Hubs: Environmental Decisions (funded 2007, re-funded 2010, 2015) Fostering world-leading research in environmental decision making.
2007 - 2011	ARC Fellow (ARC Discovery), Senior Research Fellow, University of Melbourne Environmental monitoring under severe uncertainty; efficient design and allocation of resources to monitoring for decision making under uncertainty.
2004 - 2006	Research Fellow, University of Melbourne (ARC Linkage) Practical, powerful and cost effective monitoring of biodiversity
2003 - 2004	Research Fellow, Canadian Forest Service/University of Melbourne Dynamic landscape models for evaluating forest management strategies
1998 - 2003	PhD, School of Botany, University of Melbourne (Mark Burgman) Improved spatial models of wildlife habitat

TEACHING

2010 - ongoing	Coordinator of <i>Applied Ecology</i> (ECOL 30005), 10 lectures, 2015 score = 4.7
2010	Environmental Modelling (606-661), Joint coordinator, 2010 score = 4.4
2006 - ongoing	Flora of Victoria, Global Environmental Change, Risk Assessment, Conservation Biology (minor contributions)
2003 - ongoing	Short courses on Bayesian statistics for ecologists (20+ courses in total)
2007	Guest presenter; conservation planning (Port Elizabeth)
2003 - 2006	Guest lecturer, RMIT and Deakin: Conservation Biology

HIGHER DEGREE SUPERVISION

PhD

Beth Crase	Forecasting spatial changes in Mangroves (completed)
Sacha Jellinek	Value of revegetated linear strips and patches of habitat for faunal conservation: reconciling ecological and landholder perspectives (comp)

Tracy Rout	Monitoring and managing species when their presence is uncertain (comp)
Yacov Salamon	Unimodal density estimation with applications in expert elicitation and decision making under uncertainty (completed)
Georgia Garrard	Imperfect detection and minimum survey effort during flora survey (comp)
Tanja Straker	Microbat ecology and conservation in urban environments (comp)
Darren Southwell	Optimal metapopulation management (comp)
Peter Wilson	A critical examination of the abundance-occupancy relationship (comp)
John Baumgartner	Distribution model uncertainty and the evaluation of climate change impacts on biodiversity (comp)
Skipton Woolley	Assessing patterns and processes of seafloor diversity to inform conservation management (submitted)
Michelle Ensby	Detection estimation
Lucy Rose	Prioritizing management and conservation of wetland biodiversity
Chris Hallam	Spatial prioritization based on species viability
Simon Kapitza	Assessing the impacts of international trade on biodiversity

Masters (Master of Science^ and Master of Environment)*

Hannah Pearson^	The effects of woodland restoration on woodland birds (completed) – H1
Chrissy Czembor^	Modelling stand structure and habitat dynamics in box-ironbark forests based on expert knowledge (completed) – H1
David Wilkinson^	Monitoring for the conservation of the giant gecko on Christmas Is. - H1
Kate Cranney^	Monitoring to report on conservation effectiveness – H1
Natasha Cadenhead^	Modelling the long-term viability of the great desert skink under climate change (completed) – H1
Madeline Brenker^	The use of viability models to evaluate the benefits of a conservation plan (completed) – H1
Chris Pocknee^	Optimal monitoring of Tree Kangaroos comparing drone and ground surveys (current)
Monserrat Lara*	Prioritizing the conservation of Platypus in Melbourne's waterways (completed) – H1
Billy Geary*	The use of predator prey models to optimize fire management in Victoria (current)

Hons

Lucy Arrowsmith	Modelling occupancy and detectability in urban grasslands - H1
Sam Citroen	Adaptive monitoring based on population model predictions - H1
Darren Southwell	Distribution model uncertainty impacts on viability assessment - H1

Past postdocs

Michael Bode, Tracey Rout, Joslin Moore, Kirsten Parris, Carlie Cook, Bonnie Wintle, Tracey Regan, Tamsin Lee, Amy Whitehead, Fiona Caryl, Jane Catford, Libby Rumpff, David Duncan, Alejandra Moran-Ordinez

Current postdocs

Cindy Hauser, Anja Skroblin, Darren Southwell, Bronwyn Hradski, Jose Lahoz-Monfort, Heini Kujala, Pia Lentini, Natalie Briscoe, Catherine Selwood

GRANTS AND CONSULTANCIES (\$~20M)

2015 - 2021	National Environmental Science Program Threatened Species Recovery Hub \$6.1M to Melbourne (Wintle, McCarthy, Vesk, Kearney, Phillips) Melbourne Leader – Deputy Director
2017 - 2020	ARC Discovery grant: <i>Predicting the ecological and economic outcomes of trade</i> . \$589K (Wintle, Kompass, Bryan, Burgman - DP170104795)
2011 - 2015	NERP Research Hub for Environmental Decisions \$3.8M to Melbourne (Wintle, McCarthy, Vesk, Parris, Burgman, Bode) Dept Director.
2011 - 2018	ARC Centre of Excellence for Environmental Decisions: \$3.5M to Melbourne (McCarthy, Wintle, Burgman, Bode, et al.). Theme Leader.
2011 - 2015	ARC Future Fellowship: From prediction to adaptation: responding to rapid ecosystem shifts under climate change. \$450K (Wintle)
2011 - 2016	ARC Discovery grant and ARF: Robust climate adaptation strategies for biodiversity. \$512K (Wintle, Moilanen - Declined)
2015 - 2018	ARC Linkage. evidence-based strategy to keep platypus from extinction. \$444K (Kingsford, Wintle)
2015 - 2018	ARC Linkage. Arresting declines of arboreal mammals in the tropical savannas \$327K (Murphy, Woinarski, Wintle)
2011 - 2013	Monitoring returns on national investments in biodiversity conservation. DotE extension to NERP - \$270K (Wintle)
2012 - 2016	ARC Linkage grant; Adaptive management of arid ecosystems. \$360K (Bode, Wintle, Rumpff, Benshamesh)
2011 - 2014	Australia and Pacific Science Foundation; Are lizards toast? Climate warming, fire and lizard extinctions in the Australian arid zone. \$42K (Kearney, Wintle, Stow, Moore, Tracy)
2011 - 2015	ARC Linkage grant; Adaptive management of native vegetation. \$360K (Vesk, Wintle, Duncan)
2011 - 2012	NCCARF ARGP; Optimal habitat protection and restoration for climate adaptation \$324K (Fuller, Wintle, Possingham, Taylor)
2009 - 2013	ARC Linkage; Robust prediction and decision strategies for managing extinction risks under climate change. \$750K (Wintle, Keith, <i>et al.</i>)
2009 - 2012	ARC Linkage; Designing fauna-friendly cities and towns. \$470K (Wintle, Van Der Ree, <i>et al.</i>)
2007 - 2010	CERF: Applied Environmental Decision Analysis, to Melbourne. \$2.1M (Wintle, McCarthy, Burgman), Dept Director.
2009 - 2010	AWRC (DAFF), Predicting ecosystem invasibility. \$100K (Wintle, Vesk)
2009 - 2010	VIC DSE, Adaptive management of vegetation. \$110K (Wintle, Vesk)
2007 - 2010	ARC Fellowship and ARC Discovery Grant, Optimal environmental monitoring under severe uncertainty. \$350K (Wintle & McCarthy)
2008 - 2011	ARC Linkage, Biodiversity planning on the urban fringe. \$550K (Bekessy, McCarthy, Wintle)
2007 - 2011	Parks Victoria Research Partners: Various \$80K
2004 - 2007	ARC Linkage, Re-imagining the Australian Suburbs: Biodiversity planning in urban fringe landscapes. \$497K (Bekessy, McCarthy, Wintle)
2004 - 2007	ARC Linkage, Optimal monitoring for conservation. \$380K (Burgman)

2002 - 2003 a) Wildlife habitat models for urban planning, HROC, \$120K b)
Detectability of marsupials and forest owls, State Forests of NSW. \$40K

AWARDS AND SCHOLARSHIPS

2010 ARC Future Fellowship and ARC Australian Postdoctoral Fellowship
2007 ARC APD Fellowship
2009 UFZ (German Government) Visiting Scholar
2003 Land & Water Australia, Traveling Fellowship
2001 Agriculture Fisheries and Forestry Australia, Young Scientist Award
2000 Holsworth Scholarship

SERVICE

- Editorial Board: *Diversity and Distributions* and *Journal of Applied Ecology*, Guest Ed *Cons. Biol.*
- Reviewer: *Ecology*, *TREE*, *Ecol. Letts.*, *Cons.Biol*, *Biol.Cons*, *Ecol. Appl*, *Acta Oecol.*, many others...
- Grant reviewer for the ARC, Italian RC, Israel Science Foundation, European Commission, Finnish Academy of Science, and EarthWatch
- Numerous international conference presentations, plenary talks, ESA student forum

OTHER PROFESSIONAL HISTORY

1996 - 1998 Senior Policy Officer, QLD Department of Natural Resources

POPULAR MEDIA

- ABC 7pm News [interview](#) on climate change after *Nature Climate Change* publication
- Radio National and ABC radio and television interviews on climate change, [land clearing](#) and [valuing nature](#).
- Newspaper articles and comments on [endangered species](#), [forestry](#) and other [impacts](#)
- Article in the Conversation [on efficient conservation spending](#)
- Public forum presentation at Australian Museum 'Attenborough's Ark – broadcast on ABC Radio:<http://www.abc.net.au/radionational/programs/bigideas/threatened-species/7777864>

Summary

- 99 peer reviewed publications
- 13 published reports
- *h*-index = 39 (Google Scholar), *i*10 index = 67 (Google Scholar)

Publications list (underline = student or postdoc in my group)

1. Morán-Ordóñez A, Briscoe N.J. & **Wintle B.A.** (2017). Modelling species responses to extreme weather provides new insights into constraints on range and likely climate change impacts for Australian mammals. *Ecography*. (*accepted*)
2. Taylor, C., Cadenhead, N., Lindenmayer, D.B. & **Wintle, B.A.** (2017). Improving the Design of a Conservation Reserve for a Critically Endangered Species. *PloS One*, 12, e0169629
3. Briscoe N., Kearney M., Taylor C., & **Wintle B.A.** (2016) Unpacking the mechanisms captured by a correlative SDM to improve predictions of climate refugia. *Global Change Biology*.
4. Woolley S., Tittensor D.P., Dunstan P.K., Guillera-Arroita G., Lahoz-Monfort J.J., **Wintle B.A.**, Worm B. & O'Hara T.D (Accepted). Energy drives unique global patterns of deep-sea biodiversity. *Nature*.
5. Moran-Ordóñez A., Lahoz-Monfort J., Elith J., **Wintle B.A.** (2016) Evaluating 318 continental-scale species distribution models over a 60-year prediction horizon: what factors influence reliability of predictions? (*accepted*) *Global Ecology and Biogeography*
6. Lee T.E., Fisher D.O., Bloomberg S., **Wintle B.A.** (2016) Extinct or still out there? Disentangling influences on extinction and rediscovery helps to clarify the fate of species on the edge. Accepted. *Global Change Biology*.
7. Woolley S., O'Hara T., **Wintle B.A.**, Dunstan P. (2016) Characterising uncertainty in Generalised Dissimilarity Models. (*accepted*) *Methods in Ecology and Evolution*
8. Bode, M., Baker, C.M., Benshemesh, J., Burnard, T., Rumpff, L., Hauser, C.E., Lahoz-Monfort J. & **Wintle B. A.** (2016). Revealing beliefs: using ensemble ecosystem modelling to extrapolate expert beliefs to novel ecological scenarios. *Methods in Ecology and Evolution*. (*accepted*)
9. Whitehead A.L., Kujala H., **Wintle B.A.** (2016) Dealing with cumulative biodiversity impacts in strategic environmental assessment: A new frontier for conservation planning. *Conservation Letters*.
10. Moran-Ordóñez A., Whitehead A., Luck G., Cook G., Fitzimmons J., **Wintle B.A.** (2016). Analysis of trade-offs between biodiversity, carbon farming and agricultural development in northern Australia reveals the benefits of strategic planning. *Conservation Letters*.
11. Maron M., Ives C., Kujala H., ... Hobbs R., Keith D., **Wintle B.A.**, Evans M. (2016) Taming a Wicked Problem: Resolving Controversies in Biodiversity Offsetting. *Biosciences*.
12. Mokany, K., Ferrier, S., Connolly, S.R., Dunstan, P.K, Fulton, E.A., ... **Wintle B.A.** (2016). Integrating modelling of biodiversity composition and ecosystem function. *Oikos*. 125:10-19.
13. Roberts, D.R., Bahn, V., Ciuti, S., Boyce, M.S., Elith, J., Guillera-Arroita, G., **Wintle B.A.**, Hartig F., Dormann C. (2016). Cross-validation strategies for data with temporal, spatial, hierarchical, or phylogenetic structure. *Ecography*. (*accepted*)
14. Straka T.M., Lentini P.E., Lumsden L.F., **Wintle B.A.**, Van der Ree R. (2016). Urban bat communities are affected by wetland size, quality and pollution levels. *Ecology and Evolution* 6:4761-4774
15. Caryl F., Lumsden L., Van Der Ree R., & **Wintle B.A.** (2015). Functional responses of insectivorous bats to increasing housing density support 'land-sparing' rather than 'land-sharing' urban growth strategies. *Journal of Applied Ecology*. 53:191-202.
16. Bardos D.C., Guillera-Arroita, G. & **Wintle B.A.** (2015). Valid auto-models for spatially autocorrelated occupancy and abundance data. *Methods in Ecology and Evolution*.
17. Lentini P.E., Bird T.J, Griffiths S.R, Godinho L.N, **Wintle B.A.** (2015) A global synthesis of survival estimates for microbats. *Biology Letters*. 11: 20150371.

18. Kujala H., AL Whitehead, WK Morris, Wintle B.A. (2015) Towards strategic offsetting of biodiversity loss using spatial prioritization concepts and tools: a case study on mining impacts in Australia. *Biological Conservation*, In press.
19. Rose, L.E., Heard, G.W., Chee, Y.E. & Wintle, B.A. (2015). Cost-effective conservation of an endangered frog under uncertainty. *Conservation Biology*. Accepted.
20. Cadenhead N., Kearney M.R., Moore D., McAlpin S. & Wintle B.A. (2015). Model and scenario uncertainty dominate the evaluation of options for conserving the great desert skink. *Conservation Letters*. Accepted.
21. Cruse B.C., Vesk, P.A., Leidloff, A. & Wintle B.A. (2015). Modelling both dominance and species distribution provides a more complete picture of changes to mangrove ecosystems under climate change. *Global Change Biology*, doi: 10.1111/gcb.12930
22. Guillera-Arroita, G., Lahoz-Monfort, J.J., Elith, J., Gordon, A., Kujala, H., Lentini, P.E., McCarthy M.A & Wintle B.A. (2015). Is my species distribution model fit for purpose? Matching data and models to applications. *Global Ecology and Biogeography*. In press.
23. Lentini P.E. & Wintle B.A. (2015). Spatial conservation priorities are highly sensitive to choice of biodiversity surrogates and species distribution model type. *Ecography*. In press
24. Guillera-Arroita G., Lahoz-Monfort J.J., McCarthy, M.A. & Wintle, B.A. (2015). Threatened species impact assessments: survey effort requirements based on criteria for cumulative impacts. *Diversity and Distributions*. In press.
25. Cook C.N., Inayatullah S., Burgman M.A, Sutherland W.J, Wintle B.A. 2014. Strategic foresight: how planning for the unpredictable can improve environmental decision-making. *Trends in Ecology & Evolution*. **29**:531-541.
26. Cruse B., Leidloff A., Vesk P., Fukuda Y., Wintle B.A. 2014. Incorporating spatial autocorrelation into species distribution models alters forecasts of climate mediated range shifts. *Global Change Biology*. **20**:2566-2579
27. Lahoz-Monfort, J. Guillera-Arroita G., Wintle B. A. 2014. Imperfect detection impacts the performance of species distribution models. *Global Ecology and Biogeography*. **23**:504-515
28. Cook C.N. Wintle B.C., Aldrich S.C., Wintle B.A. 2014. Using strategic foresight to assess conservation opportunity. *Conservation Biology*. **26**: 1474-1486.
29. Caryl, F., Hahs, A., Lumsden, L., Van der Ree, R., Wilson, C. & Wintle, B.A. 2014. Continuous predictors of species distributions support categorically stronger inference than ordinal and nominal classes: an example with urban bats. *Landscape Ecology*, **29**: 1237-1248.
30. Guillera-Arroita G., Lahoz-Monfort J.J., MacKenzie D.I., Wintle B.A. & McCarthy M.A. 2014. Ignoring imperfect detection in biological surveys is dangerous: A response to 'Fitting and Interpreting Occupancy Models'. *PLoS one*, **9**, e99571.
31. Mills M., Nicol S., Wells J.A., Lahoz-Monfort J.J., Wintle B.A, Bode M. et al. 2014. Minimizing the cost of keeping options open for conservation in a changing climate. *Conservation Biology*, **28**, 646-653.
32. Whitehead A.L., Kujala H., Ives C.D. Wintle B.A et al. 2014. Integrating biological and social values when prioritising places for biodiversity conservation. *Conservation Biology*. **51**: 251-258.
33. Garrard G.E., Bekessy S., McCarthy M., Wintle B.A. 2015. Incorporating detectability into environmental impact assessment for threatened species. *Conservation Biology*. **29**:216-225.
34. Lee T.E., M.A. McCarthy, B.A. Wintle, M. Bode, D.L. Roberts and M.A. Burgman. 2014. Inferring extinctions from sighting records of variable reliability. *Journal of Applied Ecology*. **51**:251-258
35. Jellinek S., Parris K.M, McCarthy, M.A., Wintle B.A., Driscoll D.A. 2014. Reptiles in restored agricultural landscapes: The value of linear strips, patches and habitat condition. *Animal Ecology*. In press.
36. Jellinek S., Rumpff R., Driscoll D.A., Parris K.M, Wintle B.A. 2014. Modelling the benefits of habitat restoration in socio-ecological systems. *Biological Conservation* **169**: 60-67
37. Lindenmayer D.B., Piggott M.P., Wintle B.A. Counting the books while the library burns: why conservation monitoring programs need a plan for action. *Frontiers in Ecology and the Environment* **11**: 549-555

38. Guisan A., Tingley R., *et al.* 2013. Predicting species distributions for conservation decisions. *Ecology Letters* **16**:1424-1435
39. Wilson J.N., Bekessy S.A., Parris, K.M., Gordon, A., Heard, G.W., **Wintle, B.A.** 2013. Impacts of climate change and urban development on the spotted marsh frog (*Limnodynastes tasmaniensis*). *Austral Ecology* **38**: 11-22.
40. Saunders D.A., **Wintle B.A.**, Mawson P.R., Dawson R. 2013. Egg-laying and rainfall synchrony in an endangered bird species: Implications for conservation in a changing climate. *Biological Conservation*. **161**: 1-9.
41. Salomon Y., McCarthy, M.A., Taylor, P., **Wintle, B.A.** 2013. Incorporating Uncertainty of Management Costs in Sensitivity Analyses of Matrix Population Models. *Conservation Biology* **27**: 134-144.
42. Bekessy S.A., White, M., Gordon, A., Moilanen, A., McCarthy, M.A., **Wintle, B.A.** 2013. Transparent planning for biodiversity and development in the urban fringe. *Landscape and Urban Planning* **108**: 140-149.
43. Peer G.A., ... **Wintle B.A.**, Henle K. 2013. A protocol for better design, application, and communication of population viability analyses. *Conservation Biology*.
44. **Wintle B. A.**, Walshe, T.V., Parris, K.M.; et al. 2012. Designing occupancy surveys and interpreting non-detection when observations are imperfect. *Diversity Distributions* **18**: 417-424.
45. Fordham, D.A., Akcakaya, H.R., Araujo, M.B., Elith, J., Keith, D.A., Pearson, R., Auld, T.D., Mellin, C., Morgan, J.W., Regan, T.J., Tozer, M., ... **Wintle, B.A.**, Yates, C., Brook, B.W. 2012. Plant extinction risk under climate change: are forecast range shifts alone a good indicator of species vulnerability to global warming? *Global Change Biology* **18**: 1357-1371.
46. Crase B., A. C. Liedloff, P. A. Vesk, M. Burgman, and **B. A. Wintle**. 2013. Hydroperiod is the main driver of the spatial pattern of dominance in mangrove communities. *Global Ecology & Biogeography*. **22**: 806–817
47. Solow A., Smith W., Burgman M., Rout T., **Wintle B.A.** & Roberts D. 2012. Uncertain sightings and the extinction of the Ivory-billed woodpecker. *Conservation Biology*. **26**: 180-184.
48. Catford J.A., Vesk P.A., White M. & **Wintle B.A.** 2012. Hotspots of plant invasion predicted by propagule pressure and ecosystem characteristics *Diversity and distributions*. **17**: 1099-1110.
49. Garrard G.E., McCarthy M.A., Williams N.S.G., Bekessy S.A., **Wintle B.A.** 2012. A general model of detectability using species traits. *Methods in Ecology and Evolution* **4**: 45-54.
50. Gordon A., **Wintle B.A.**, Bekessy S.A., Pearce J.L., Veneir L.A., Wilson J. 2012. The use of dynamic landscape metapopulation models for forest management: a case study of the red-backed salamander. *Canadian Journal of Forest Research*. **42**: 1091 - 1106.
51. Rumpff L., Duncan DH, Vesk PA, **Wintle B.A.** 2012 Development of a state-and-transition model to guide investment in woodland vegetation condition. In: *Landscape Logic: Integrating Science for Landscape Management*, pp. 157-172. CSIRO Publishing, Canberra.
52. **Wintle B.A.**, Bekessy S.A., Keith D.A. *et al.* 2011. Ecological-economic optimization of biodiversity conservation under climate change. *Nature Climate Change*. **1**: 355-359.
53. **Wintle B.A.**, Runge M. & Bekessy S.A. 2010. Allocating monitoring effort in the face of unknown unknowns. *Ecology Letters*, **13**: 1325–1337
54. Crase B., Liedloff A.C. & **Wintle B.A.** 2011. A new method for dealing with residual spatial autocorrelation in species distribution models. *Ecography* **35**: 879–888
55. Sebastián-González E., Botella F., Sánchez-Zapata J.A., Figuerola J., Hiraldo F. & **Wintle B.A.** 2011. Linking cost efficiency evaluation with population viability analysis to prioritize wetland bird conservation projects. *Biological Conservation*. **144**: 2354–2361
56. Chisholm R. & **Wintle B.A.** 2011. Choosing ecosystem service investments that are robust to uncertainty. *Ecological Applications*. **22**: 697-704
57. Bekessy S.A., **Wintle B.A.**, et al. Burgman M.A. 2010. The biodiversity bank must not be a lending bank. *Conservation Letters*. **3**:151-158.
58. Kearney M. A., **Wintle B.A.** & Porter W. P. 2010. Independent species distribution models make robust predictions of climate change impacts on a folivorous mammal. *Conservation Letters*. **3**:203-213.
59. En Chee Y. & **Wintle B.A.** 2010. A Bayesian model-based framework for monitoring and managing population control. *Journal of Applied Ecology*, **47**, 1169–1178

60. Rumpff L., Duncan D, Vesk P., Keith D.A. & **Wintle B.A.** 2011. State-and-transition modelling for adaptive Management of native woodlands. *Biol. Conservation*, 144, 1224-1236
61. Czembor C.A., Morris W.K., **Wintle B.A.** & Vesk P.A. 2011 Quantifying variance components in ecological models based on expert opinion. *J. Applied Ecology*. **48**: 736-745
62. Hodgson J.A., Moilanen A., **Wintle B.A.** & Thomas C.D. 2011. Habitat area, quality and connectivity: striking the balance for efficient conservation. *J. Appl. Ecology*, **48**: 148-152
63. McDonald-Madden, E. *et al.* & **Wintle B.A.** 2010. Active adaptive conservation of threatened species in the face of uncertainty. *Ecological Applications* **20**:1476–1489.
64. Possingham H.P., Fuller R.A., Joseph L.N. & **Wintle B.A.** 2011. Choosing among long-term ecological monitoring programs and knowing when to stop. In: *Long term ecological monitoring*, (Lindenmayer, D.B, Ed). CSIRO Publishing Canberra.
65. Visconti, P., R. L. Pressey, D. B. Segan, & **Wintle B. A.** 2010. Conservation planning with dynamic threats: the role of spatial design and priority setting for species persistence. *Biological Conservation*.**143**:756-767.
66. Glen, A.S., Pennay, M., Dickman, C.R., **Wintle, B.A.** & Firestone, K. B. 2010. Diets of sympatric native and introduced carnivores in the Barrington Tops. *Austral Ecology*. **36** 290-296
67. McDonald-Madden E., A. Gordon, **B. A. Wintle**, H. Grantham, S. Walker, S. Carvalho, M. Bottrill, L. Joseph, and H. P. Possingham. 2009. Reporting on 'true' conservation progress. *Science* **323**:43-44.
68. Betts, M. G., L. Ganio, M. Huso, **B. A. Wintle**. 2009. The ecological importance of space in species distribution models: A comment on Dormann et al. *Ecography* **32**:1-5.
69. Bekessy, S. A., **B. A. Wintle**, A. Gordon, et al. and M. A. Burgman. 2009. Modelling human impacts on the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*). *Biological Conservation* **142**:2438-2448
70. Hodgson J., C. D. Thomas, **B. A. Wintle**, and A. Moilanen. 2009. Climate change, connectivity and conservation decision making - back to basics. *Journal of Applied Ecology* **46**:964-969.
71. Bode M., and **B. A. Wintle**. 2009. How to build an efficient conservation fence. *Conservation Biology* **24**:182-188.
72. Burgman M. A., **B. A. Wintle**, et al. and Y. Ben-Haim. 2009. Uncertainty analysis for Bayes nets: reconciling cost and environmental benefit in invasive species management. *Risk Analysis*.
73. van Wilgen, N. J., J. Elith, J. Wilson, **B. A. Wintle**, D. Richardson. 2009. Alien invaders and reptile traders: What drives the live animal trade in South Africa? *Animal Conservation* **13** 24-32
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