

## A. Curriculum Vitae

### Professor Robert John WHELAN

#### 1. Personal

<b>Date of birth</b>	29th July 1952	<b>Citizenship</b>	Australian
<b>Home address</b>	80 Willcath St. Bulli, NSW, 2516	<b>Home phone</b>	(02) 4283 8791
<b>Work address</b>	Faculty of Science University of Wollongong, Wollongong, NSW, 2522 Australia	<b>Work phone</b> <b>Fax</b>	(02) 4221 3530 (02) 4221 4135

#### 2. Education

<b>Primary</b>	1957-64	Christ Church Day School, Adelaide.
<b>Secondary</b>	1965-69	St Peter's College, Adelaide.
<b>Tertiary</b>	1970-74 1974-78	Flinders University of South Australia; BSc (Hons). University of Western Australia; PhD.
<b>Post-doctoral</b>	1978-79 1980-81	School of Plant Biol., Uni. College of North Wales, UK. Dept of Zoology, Uni. of Florida, Gainesville, USA.

#### 3. Theses

1973	<i>The effects of herbivore grazing and physical stability on the plant diversity of an annual grassland.</i> BSc (Hons), Flinders University
1978	<i>The influence of insect grazers on the establishment of post-fire plant populations.</i> PhD Thesis, University of Western Australia.

#### 4. Scholarships and Awards

1971-73	Commonwealth Tertiary Award
1974, 77	University of Western Australia Postgraduate Studentship
1989	Fulbright Senior Award
1993	Vice-Chancellor's Award for Excellence in Teaching

#### 5. Positions Held

1974	Research Officer, Elder Smith-Goldsbrough Mort Pty. Ltd., W.A.
1975-76	Graduate Teaching Assistant, Zoology Dept, University of W.A.
1978-79	Lecturer, MSc Ecology, Plant Biology, Uni. College of North Wales.
1980-82	Research Fellow, University of Florida, USA.
1982-86	Lecturer, Biology Department, University of Wollongong.
1986-90	Senior Lecturer, University of Wollongong.
1990-93	Associate Professor, University of Wollongong.
1992-2000	Head of Department of Biological Sciences, Uni. of Wollongong.
1993	Professor of Biological Sciences, University of Wollongong.
2001-02	Director; Institute for Conservation Biology, Uni. of Wollongong.
2002-present	Dean of Science, University of Wollongong.

## 6. Professional Activities

### *Responsibilities in Professional Societies*

- 1984-89 Editor, *Australian Journal of Ecology*  
 Council Member, *Ecological Society of Australia*
- 1989 Organizer, *Ecological Society of Australia* National Conference
- 1989-95 Editorial Board, *Australian Journal of Ecology*
- 1993-99 Vice-President, *Ecological Society of Australia*

### *Other Professional Activities*

- 1990-2000 Editorial Board, *Ecological Abstracts*, Elsevier.
- 1995-97 ARC Panel - Research Training and Careers Committee.
- 1995-96 *International Symposium on the Natural History and Biology of Proteaceae* (Symposium Chair).
- 1996-2000 NSW Govt. Forest Advisory Council member.
- 1996- National Parks Advisory Council member (Deputy Chair 2001; Chair 2002–04).
- 1997 Steering committee, DEETYA discipline review of Biological Sciences.
- 2001-02 ARC Biological Sciences and Biotechnology Expert Advisory Committee.
- 2003-04 COAG Inquiry into Bushfire Mitigation and Management – panel member.
- 2005 Research Advisory Committee, Conservation Commission of WA

### *Society Memberships*

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|------------------------------------|--|
| Ecological Society of Australia    | Society for Conservation Biology             |
| Ecological Society of America      | Australasian Pollination Ecologists' Society |
| Linnean Society of New South Wales |  |

## 7. Administrative Experience

- 1982 Bachelor of Environmental Science Degree Steering Committee
- 1983-87 Science Faculty Planning Committee
- 1983-93 Environmental Science Board of Studies
- 1988-93 Founding member and co-ordinator; Australian Flora and Fauna Research Program
- 1988-89 Board of Research & Postgrad. Studies
- 1989-95 Graduate Faculty – Executive & Research Committees
- 1989-90 Science Faculty Postgraduate Studies Committee
- 1989-90 Co-ordinator; Bachelor of Env. Science Degree (6 months)
- 1990-91 Co-ordinator, Research Students' Open Day
- 1991-92 University Rep.; Wollongong Council's Escarpment Working Party
- 1992-95 University Day Committee, University of Wollongong
- 1992-2000 Head of Department of Biological Sciences
- 1994-95 EEO Working party, University of Wollongong
- 1994 External review panel, Dept. Ecol. & Evol. Biol., Monash University
- 1996 Chair, review panel, Dept. Botany, UNE.
- 1997 Reviewer, CSIRO Plant Industry, (Aust. Flora Research & Management Program).
- 1997 Chair, review panel, School of Biol. Sciences, Murdoch University
- 2000 External reviewer, Natural Resource Management degree, UNE.
- 2004 External reviewer, School of Natural Sciences, Edith Cowan University.

## B. Publications and Reports

### 1. Scientific Publications

#### A. Monographs

1. **Whelan, R.J.** (1995) *The Ecology of Fire*. Cambridge University Press, Cambridge. (reprinted 1996, 1999, 2001)
2. Ellis, S., Kanowski, P. & Whelan, R.J. (2004) Council of Australian Governments – *National Inquiry into Bushfire Mitigation and Management*. Australian Government, Canberra. 415 pp.

#### B. Book Chapters

1. **Whelan, R.J.** (1986) Seed dispersal in relation to fire. pp 237-271 in: D.R. Murray (ed.) *Seed Dispersal*. Academic Press, Sydney
2. **Whelan, R.J.** (1989) The influence of fauna on plant species composition. pp. 107-142 in: J.D. Majer (ed.) *Primary Succession: The Role of Animals in Reclaimed Land*. Cambridge University Press, Cambridge.
3. **Whelan, R.J.** & Muston, R.M. (1991) Fire regimes and management in south-eastern Australia, pp 235-258 in: *High Intensity Fire in Wildlands: Management Challenges and Options. Proceedings of the 17th Tall Timbers Fire Ecology Conference Tallahassee, USA*.
4. Wilson, S.C. & **Whelan, R.J.** (1993) Prey camouflage in the Sugar Glider and predatory response by the Variable Goshawk. pp. 337-343 in: P. Olsen (ed.) *Australian Raptor Studies*. Australian Raptor Association, Melbourne.
5. **Whelan, R.J.** & Zubovic, A. (1994) Environmental Science – Projects in Ecology: an evaluation of a co-operative education project. pp. 249-268 in: R. Ross & J. Bain (eds) *Promoting Teaching in Higher Education. Proceedings of a DEET-funded National Teaching Workshop*. Griffith Uni., Qld.
6. **Whelan, R.J.** (1998) Communicating with a poster presentation. pp. 57-60 in: R. Wills & R.J. Hobbs (eds) *Ecology for Everyone. Communicating Ecology to Scientists, the Public and the Politicians*. Surrey Beatty & Sons, Sydney.
7. Harper, B., Hedberg, J. & **Whelan, R.J.** (1998). Developing Skills in Ecology Research for Undergraduate Students: An Interactive Multimedia Simulation. pp. 466-471 in: Ottmann, T. and Tomek, I. (eds.) *Proceedings of ED-MEDIA 98*. AACE, Freiburg, Germany.
8. Cox, J. & **Whelan, R.J.** (1998) Soil fauna in an artificial soil mix. pp. 263-268 in: Fox, H.R., Moore, H.M. and McIntosh, A.D. (eds) *Land Reclamation: Achieving Sustainable Benefits*. Balkems, Rotterdam.
9. **Whelan, R.J.** & Baker, J.R. (1999) Fire in Australia: coping with variation in ecological effects of fire. pp. 71-79 in: Sutton, F., Keats, J., Dowling, J. and Doig, C. (eds). *Protecting the Environment, Land, Life and Property. Proceedings of the Bushfire Management Conference*. NSW Nature Conservation Council, Sydney.
10. **Whelan, R.J.**, Ayre, D.J., England, P., Llorens, T. & Beynon, F. (2000) Population fragmentation and the ecology and genetics of *Grevillea* (Proteaceae). pp. 253 - 269 in: Young, A.G. and Clarke, G.M. (eds) *Genetics, Demography and Viability of Fragmented Populations*. Cambridge University Press, Cambridge.
11. **Whelan, R.J.**, Rodgerson, L., Dickman, C.R. & Sutherland, E.F. (2002) Critical life cycles of plants and animals: developing a process-based understanding of population changes in fire-prone landscapes. pp. 94-124 in: Bradstock, R.A., Williams, J. and Gill, A.M. (eds) *Flammable Australia: The Fire Regimes and Biodiversity of a Continent*. Cambridge University Press, Cambridge.
12. Keith, D.A., McCaw, W.L. & **Whelan, R.J.** (2002) Fire regimes in heathlands and their effects on plants and animals. pp. 199-237 in: Bradstock, R.A., Williams, J. and Gill, A.M. (eds)

*Flammable Australia: The Fire Regimes and Biodiversity of a Continent*. Cambridge University Press, Cambridge.

13. **Whelan, R.J.** (2003). Adaptive Management: What does it mean and how can it be used in fire management? In: Baker, A., Diekman, B. and Sparks, M. (eds) *Bushfire: Managing the Risk*. NSW Nature Conservation Council, Sydney.
14. **Whelan, R.J.**, Brown, C.L. & Farrier, D. (2004) The precautionary principle: what is it and how might it be applied in threatened species conservation? In: Hutchings, P., Lunney, D. and Dickman, C. (eds) *Threatened Species Legislation: Is it Just and Act?* Royal Zoological Society of NSW, Sydney.
15. Farrier, D. & **Whelan, R.J.** (2004) (Why) Do we need threatened species legislation? In: Hutchings, P., Lunney, D. and Dickman, C. (eds) *Threatened Species Legislation: Is it Just and Act?* Royal Zoological Society of NSW, Sydney.
16. **Whelan, R.J.** (2004) Keynote Address – Landscape Management: Is it the Future? pp. 63-70 in: Baker, A. et al. (eds) *Bushfire in a Changing Environment – New Directions in Management*. Nature Conservation Council of NSW, Sydney.
17. **Whelan, R.J.** (2006) Keynote Address – The Ecology of Fire: Developments since 1995 and outstanding questions. pp. xx-xxx *Life In A Fire-Prone Environment: Translating Science Into Practice*. (in press).
18. **Whelan, R.J.**, Collins, L. & Loemker, R. (2006) Predicting impacts of fuel reduction for asset protection on threatened species. . pp. xx-xxx *Life In A Fire-Prone Environment: Translating Science Into Practice*. (in press).

### C. Refereed journal articles

1. **Whelan, R.J.** & Main, A.R. (1979) Insect grazing and post-fire plant succession in south-west Australian woodland. *Australian Journal of Ecology*, **4**, 387-398.
2. **Whelan, R.J.** & Burbidge, A.H. (1980) Flowering phenology, seed set and bird pollination in five Western Australian *Banksia* species. *Australian Journal of Ecology*, **5**, 1-7.
3. **Whelan, R.J.**, Langedyk, W. & Pashby, A. (1980) The effects of a wildfire on arthropod populations in Jarrah-*Banksia* woodland. *Western Australian Naturalist*, **14**, 214-220.
4. Linhart, Y.B. & **Whelan, R.J.** (1980) Woodland regeneration in relation to grazing and fencing in Coed Gorswen, North Wales. *Journal of Applied Ecology*, **17**, 827-840.
5. Feinsinger, P., **Whelan, R.J.** & Kiltie, R.A. (1981) Some notes on community composition: assembly by rules or by dartboards? *Bull. Ecological Soc. of America*, **62**, 125-129.
6. Burbidge, A.H. & **Whelan, R.J.** (1982) Seed dispersal in a cycad, *Macrozamia riedlei*. *Australian Journal of Ecology*, **7**, 63-67.
7. **Whelan, R.J.** (1982) Responses of slugs to unacceptable food items. *Journal of Applied Ecology*, **19**, 79-87.
8. **Whelan, R.J.** (1982) An artificial medium for feeding choice experiments with slugs. *Journal of Applied Ecology*, **19**, 89-94.
9. **Whelan, R.J.** (1985) Post-fire recruitment to plant populations in Western Australia and Florida. *Proceedings of the Ecological Society of Australia* **14**, 169-178.
10. Ballardie, R.T. & **Whelan, R.J.** (1986) Masting, seed dispersal and seed predation in the cycad *Macrozamia communis*. *Oecologia*, **70**, 100-105.
11. **Whelan, R.J.** & Goldingay, R.L. (1986) Do pollinators influence seed set in *Banksia spinulosa* Sm. and *B. paludosa* R.Br.? *Australian Journal of Ecology*, **11**, 181-186.
12. Goldingay, R.L., Carthew, S.M. & **Whelan, R.J.** (1987) Transfer of *Banksia spinulosa* pollen by mammals: implications for pollination. *Australian Journal of Zoology*, **35**, 319-325.
13. Hunt, A., Dickens, H. & **Whelan, R.J.** (1987) Movement of mammals through tunnels under railway lines. *Australian Zoologist*, **42**, 89-93.

14. Carthew, S.M., Ayre, D.J. & **Whelan, R.J.** (1988) High levels of outcrossing in populations of *Banksia spinulosa* Sm. and *Banksia paludosa* R.Br. *Australian Journal of Botany*, **36**, 217-223.
15. Taylor, G. & **Whelan, R.J.** (1988) Can honeybees pollinate *Grevillea*? *Australian Zoologist*, **24**, 193-196.
16. Copland, B.J. & **Whelan, R.J.** (1989) Seasonal variation in flowering intensity and pollination limitation of fruit set in four co-occurring *Banksia* species. *Journal of Ecology* **77**, 590-604.
17. Ayre, D.J. & **Whelan, R.J.** (1989) Factors controlling fruit set in hermaphroditic plants and the contribution of studies with the Australian Proteaceae *Trends in Ecology and Evolution* **4**, 267-272.
18. **Whelan, R.J.** & Goldingay, R.L. (1989) Factors affecting fruit set in *Telopea speciosissima* (Proteaceae): the importance of pollen limitation. *Journal of Ecology* **77**, 1123-1134.
19. Goldingay, R.L. & **Whelan, R.J.** (1990) Breeding system and tests for pollination limitation in two species of *Banksia*. *Australian Journal of Botany* **38**, 63-71.
20. Goldingay, R.L., Carthew, S.M. and **Whelan, R.J.** (1991) The importance of non-flying mammals in pollination. *Oikos* **61**, 79-87.
21. Walker, B.A. & **Whelan, R.J.** (1991) Can andromonoecy explain the low fruit:flower ratio in the Proteaceae? *Biol. J. Linn. Soc. (London)* **43**, 41-46.
22. Goldingay, R.L. & **Whelan, R.J.** (1993) The influence of pollinators on fruit positioning in the Australian shrub *Telopea speciosissima* (Proteaceae). *Oikos* **68**, 501-509.
23. Harriss, F. & **Whelan, R.J.** (1993) Selective fruit abortion in *Grevillea barklyana* (Proteaceae). *Australian Journal of Botany* **41**, 499-509.
24. Zeng, L.Z. & **Whelan, R.J.** (1993) Natural reforestation of abandoned farmland: the role of soils. *Australian Geographer* **24**, 14-25.
25. Williams, J.E., **Whelan, R.J.** & Gill, A.M. (1994) Fire and environmental heterogeneity in southern temperate ecosystems: implications for management. *Australian Journal of Botany* **42**, 125-137.
26. Ayre, D.J., **Whelan, R.J.** & Reid, A. (1994) Unexpectedly high levels of selfing in the Australian shrub *Grevillea barklyana* (Proteaceae) *Heredity* **72**, 168-174.
27. Bellgard, S.E., **Whelan, R.J.** & Muston, R.M. (1994) The impact of wildfire on vesicular-arbuscular mycorrhizae and their role in the re-establishment of post-fire plant populations. *Mycorrhiza* **4**, 139-146.
28. Baker, J.R. & **Whelan, R.J.** (1994) Detecting long-term population trends in the ground parrot. *Emu* **94**, 300-304.
29. **Whelan, R.J.** & Tait, I. (1995) Responses of plant populations to fire: fire season as an understudied element of fire regime. *CALMScience Supplement* **4**, 147-150.
30. Edwards, W. & **Whelan, R.J.** (1995) The size, distribution and germination requirements of the soil-stored seed bank of *Grevillea barklyana* (Proteaceae) *Australian Journal of Ecology* **20**, 548-555.
31. **Whelan, R.J.**, Ward, S., Hogbin, P. & Wasley, J. (1996) Responses of heathland *Antechinus stuartii* to the Royal National Park wildfire in 1994. *Journal of the Linnean Soc. of NSW* **116**, 97-108.
32. **Whelan, R.J.** & Baker, J.R. (1996) Modelling reservations: a response to Baird *et al.* (1994). *International Journal of Wildland Fire* **6**: 1-4.
33. Carthew, S.M., **Whelan, R.J.** & Ayre, D.J. (1996) Experimental confirmation of preferential outcrossing in *Banksia*. *International Journal of Plant Sciences* **157**, 615-620.
34. van Tets, I. & **Whelan, R.J.** (1997) *Banksia* pollen in the diet of Australian mammals. *Ecography* **20**, 499-505.
35. Goldingay, R.L. & **Whelan, R.J.** (1997) Powerline easements: do they promote edge effects in eucalypt forest for small mammals? *Wildlife Research* **24**, 737-744.

36. Hogbin, P., Ayre, D.J. & **Whelan, R.J.** (1998) A genetic and demographic investigation of the conservation value of the threatened shrub *Grevillea barklyana* (Proteaceae). *Heredity* **79**, 180-186.
37. **Whelan, R.J.**, de Jong, N., & von der Burg, S. (1998) Variation in bradyspory and seedling recruitment without fire among populations of *Banksia serrata* (Proteaceae). *Australian Journal of Ecology*. **23**, 121-128.
38. **Whelan, R.J.** & Brown, C. (1998) The role of *Callistemon* fruits and infructescences in protecting seeds from heat in fires. *Australian Journal of Botany*. **46**, 235-239.
39. Baker, J.R., Goldingay, R.L. & **Whelan, R.J.** (1998) Powerline easements through forests: a case study of impacts on avifauna. *Pacific Conservation Biology*, **4**, 79-89.
40. **Whelan, R.J.** & York, J. (1998) Does post-fire germination of *Hakea sericea* and *Petrophile sessilis* differ between spring and autumn burning? *Australian Journal of Botany*. **46**, 367-376.
41. Hermanutz, L., Innes, D., Denham, A. & **Whelan, R.J.** (1998) Very low fruit:flower ratios in *Grevillea* (Proteaceae) are independent of breeding system. *Australian Journal of Botany*. **46**, 465-478.
42. England, P.R., Ayre, D.J. & **Whelan, R.J.** (1999) Microsatellites in the Australian shrub *Grevillea macleayana* (Proteaceae). *Molecular Ecology*, **8**, 689-690.
43. Brown, C.L. & **Whelan, R.J.** (1999) Season of occurrence of fire and availability of viable seeds in *Hakea sericea* and *Petrophile sessilis*. *Journal of Ecology* **87**, 932-941.
44. Denham, A. & **Whelan, R.J.** (2000) Reproductive ecology and breeding system of *Lomatia silaifolia* (Proteaceae) after a fire. *Australian Journal of Botany* **48**, 261-269.
45. Cox J.A. & **Whelan, R.J.** (2000) Soil development of an artificial soil mix: nutrient dynamics, plant growth and initial physical changes. *Australian Journal of Soil Research* **38**, 465-478.
46. Richardson, M.B.G., Ayre, D.J. & **Whelan, R.J.** (2000) Pollinator behaviour, mate choice and the realised mating systems of *Grevillea mucronulata* and *Grevillea sphacelata*. *Australian Journal of Botany* **48**, 357-366.
47. Myerscough, P.J., **Whelan, R.J.** & Bradstock, R.A. (2000) Ecology of the Proteaceae with special reference to the Sydney region. *Cunninghamia* **6**, 951-1015.
48. England, P.R., Beynon, F., Ayre, D.J. & **Whelan, R.J.** (2001) A molecular genetic assessment of mating system variation in a naturally bird-pollinated shrub: contributions from birds and introduced honeybees. *Conservation Biology* **15**, 1-11.
49. Lloyd, S., Ayre, D.J. & **Whelan, R.J.** (2002) A rapid and accurate visual assessment of nectar production can reveal patterns of temporal variation in *Banksia ericifolia* (Proteaceae). *Australian Journal of Botany* **50**, 595-600.
50. **Whelan, R.J.** (2002) Managing fire regimes for conservation and property protection: an Australian response. *Conservation Biology* **16**, 1659-1661.
51. Baker, J.R., French, K.O & **Whelan, R.J.** (2002) The edge effect and ecotonal species: Bird communities across a natural edge in southeastern Australia. *Ecology* **83**, 3048-3059.
52. England, P.R., Usher, A., Ayre, D.J. & **Whelan, R.J.** (2002) Microsatellite diversity and genetic structure of fragmented populations of the rare, fire-dependent shrub, *Grevillea macleayana*. *Molecular Ecology* **11**, 967-976.
53. Farrier, D., **Whelan, R.J.**, & Brown, C. (2002). Addressing scientific uncertainty in local Government decision-making processes. *Environmental and Planning Law Journal*. **19**, 1-15.
54. Pickup, M., McDougall, K.L. & **Whelan, R.J.** (2003) Fire and flood: soil-stored seed bank and germination in the endangered Carrington Falls *Grevillea* (*Grevillea rivularis*, Proteaceae). *Austral Ecology* **28**, 128-136.
55. Brewer, I.M. & **Whelan, R.J.** (2003) Changes in dune vegetation over 60 years in a sand-mined area of the NSW Central Coast. *Cunninghamia* **8**, 85-92.

56. England, P.R., **Whelan, R.J.** and Ayre, D.J. (2003) Effects of seed bank disturbance on the fine-scale genetic structure of populations of the rare shrub *Grevillea macleayana*. *Heredity* **91**, 475-480.
57. Ooi, M., Auld, T.D. & **Whelan, R.J.** (2004) Seedling emergence patterns of *Leucopogon* (Epacridaceae) in the fire-prone vegetation of south-eastern Australia: seasonal germination in a non-seasonal rainfall region. *Plant Ecology* **174**, 183-196.
58. Llorens, T.M., Ayre, D.J. & **Whelan, R.J.** (2004) Evidence for ancient genetic subdivision among currently fragmented populations of the endangered shrub *Grevillea caleyi* (Proteaceae). *Heredity* **92**, 519-526.
59. Ooi, M., Auld, T.D. & **Whelan, R.J.** (2004) Comparison of the cut and tetrazolium tests for assessing seed viability: a study using Australian native *Leucopogon* species. *Ecological Management and Restoration* **5**, 141-143.
60. Indsto, J.O., Weston, P.H., Clements, M.A. & **Whelan, R.J.** (2005) Highly sensitive DNA fingerprinting of orchid pollinia remnants using AFLP. *Australian Systematic Botany* **18**, 207-213.
61. Rymer, P., **Whelan, R.J.**, Ayre, D.J., Russell, K. & Weston, P.H. (2005) Reproductive success and pollinator effectiveness differ in common and rare *Persoonia* species (Proteaceae). *Biological Conservation* **123/4**, 521-532.
62. Kanowski, P., **Whelan, R.J.** & Ellis, S. (2005) Inquiries following the 2002-2003 Australian bushfires: common themes and future directions for Australian bushfire mitigation and management. *Australian Forestry* **68**, 76-86.
63. Usher, A.V., Ayre, D.J. & **Whelan, R.J.** (2005). Microsatellites for Eastern Australian *Banksia* species. *Molecular Ecology Notes* **5**, 821-823.
64. Field, D.D., Ayre, D.J. & **Whelan, R.J.** (2005) The effect of local plant density on pollinator behavior and the breeding system of *Persoonia bargoensis* (Proteaceae). *International Journal of Plant Sciences* **166**, 969-977.
65. **Whelan, R.J.**, Roberts, D.G. & Ayre, D.J. (2006) Interactions between native plants in urban gardens and surrounding bushland populations: potential for contamination? *Biological Conservation* **128**, 493-500.
66. Gosper, C.R., **Whelan, R.J.** & French, K.O. (2006) The effect of invasive plant management on the rate of removal vertebrate-dispersed fruits. *Plant Ecology* (in press - DOI 10.1007/s11258-005-9078-z)
67. Walsh, J., McDougall, K., Summerell, B. & **Whelan, R.J.** (2006). *Phytophthora cinnamomi*: a potential threat to Australia's oldest national park. Accepted subject to minor revision – 25 Oct 05
68. Ooi, M.K.J, Whelan, R.J. & Auld, T.D. (2006) Unknown dormancy mechanisms and the fire-centric focus: germination of *Leucopogon* shrub species from temperate south-eastern Australia. *Annals of Botany* (in press).
69. Ooi, M.K.J, Whelan, R.J. & Auld, T.D. (2006) Persistence of obligate-seeding species at the population scale: the effects of fire intensity, fire patchiness and long fire-free intervals. *International Journal of Wildland Fire* **15**, 1-9.
70. Indsto, J., Weston, P.H., Clements, M., Dyer, A, Batley, M. and Whelan, R.J. (2006) Pollination of *Diuris maculata* R. Br. (Orchidaceae) in the Sydney region, NSW by male *Trichocolletes venustus* bees. *Australian Journal of Botany* (in press).
71. Roberts, D.G., Ayre, D.J. & **Whelan, R.J.** (in review) Are Urban Plants Genetic Reservoirs or Threats to the Integrity of Bushland Populations? *Conservation Biology*
72. Larkin, M. & **Whelan, R.J.** (in preparation) Ashes to Ash: Effects of fire intensity on *Eucalyptus delegatensis* seedling recruitment. *International Journal of Wildland Fire*
73. Bain, D., Baker, J.R., French, K.O., and **Whelan, R.J.** (in preparation) High-intensity summer fire does not necessarily eliminate fire-sensitive Eastern Bristlebirds.

#### D. Commentary & Review Articles

1. **Whelan, R.J.** (1989) Australian ecology: past and future. *Trends in Ecology and Evolution* **4**, 33-34.
2. **Whelan, R.J.** (1994) Conserving nature's ways. *Today's Life Sciences* **6(6)**, 20-25.
3. **Whelan, R.J.** (1998) *Fire*. pp. 93-94 in: Australia's State of the Forests Report - 1998. Bureau of Rural Sciences, Canberra.
4. **Whelan, R.J.** (2001) *Fire*. in: Goudie, A.S. (Ed.) *Encyclopedia of Global Change: Environmental Change and Human Society*. Oxford University Press, New York.
5. **Whelan, R.J.** (2002) Don't fight fire with fire. *Nature* **416**, 15 [March 7]
6. **Whelan, R.J.** (2003) Fire and *in situ* plant conservation. Ch. 5 in: *Threatened Species Conservation Techniques Manual*. Australian Network for Plant Conservation, Canberra.
7. **Whelan, R.J.**, Kanowski, P., Gill, A.M. & Andersen, A.N. (2006) Cross-cutting Commentary: "Living in a land of fire". 2006 State of Environment Report, Australian Government, Canberra.

#### E. Refereed publications by research students and research associates

*I encourage researchers in my group to develop independence by publishing their work as sole authors, where possible. The publications listed below represent work conducted under my supervision and in which I made a significant contribution to one or more aspects of the design, conducting, interpretation and publishing.*

1. **Goldingay, R.L.** (1986) Feeding behaviour of the Yellow-bellied Glider, *Petaurus australis* (Marsupialia: Petauridae) at Bombala, New South Wales. *Australian Mammalogy*, **9**, 17-25.
2. **Goldingay, R.L.** (1987) Sap feeding by the marsupial *Petaurus australis*, an enigmatic behaviour? *Oecologia*, **73**, 154-158.
3. **Goldingay, R.L.** & Kavanah, R.P. (1988) Detectability of the feathertail glider, *Acrobates pygmaeus*, in relation to measured weather variables. *Australian Mammalogy*, **11**, 67-70.
4. **Goldingay, R.L.** (1989) Time budget and related aspects of the foraging behaviour of the Yellow-bellied Glider, *Petaurus australis*. *Australian Wildlife Research*, **16**, 105-112.
5. **Goldingay, R.L.** (1990) The foraging behaviour of a nectar-feeding marsupial, *Petaurus australis*. *Oecologia* **85**, 191-199.
6. **Goldingay, R.L.** & Kavanah, R.P. (1990) Socioecology of the yellow-bellied glider, *Petaurus australis*, at Waratah Creek, NSW. *Australian Journal of Zoology*, **38**, 327-341.
7. **Bellgard, S.E.** (1991) Mycorrhizal associations of plant species in Hawkesbury Sandstone vegetation. *Australian Journal of Botany* **39**, 357-364.
8. **Carthew, S.M.** & Slater, E. (1991) Monitoring animal activity with automated photography. *Journal of Wildlife Management* **55**, 689-692.
9. **Goldingay, R.L.** (1991) An evaluation of hypotheses to explain the patterns of sap feeding by the yellow-bellied glider, *Petaurus australis*. *Australian Journal of Ecology*, **16**, 491-500.
10. **Goldingay, R.L.**, **Schibeci, S.M.** & **Walker, B.A.** (1991) Breeding system and pollination levels of *Banksia ericifolia*. *Australian Journal of Botany*, **39**, 365-372.
11. **Bellgard, S.E.** (1992) The propagules of vesicular-arbuscular mycorrhizal (VAM) fungi capable of initiating VAM infection after topsoil disturbance. *Mycorrhiza*, **1**, 147-152.
12. **Goldingay, R.L.** (1992) Socioecology of the yellow-bellied glider (*Petaurus australis*) in a coastal forest. *Australian Journal of Zoology*, **40**, 267-278.
13. **Bellgard, S.E.** (1993) The severity of topsoil disturbance can delay the formation of VAM in seedlings of *Trifolium repens*. *Mycorrhiza*, **3**, 25-29.

14. **Bellgard, S.E.** (1993) The topsoil as the major store of propagules of vesicular-arbuscular mycorrhizal (VAM) fungi in southeastern Australian sandstone soils. *Mycorrhiza*, **3**, 19-24.
15. **Carthew, S.M.** (1993) An assessment of pollinator visitation to *Banksia spinulosa*. *Australian Journal of Ecology*, **18**, 257-268.
16. **Carthew, S.M.** (1993) Population genetic structure of *Banksia spinulosa*. *Heredity*, **70**, 566-573.
17. **Carthew, S.M.** (1993) Patterns of flowering and fruit production in a natural population of *Banksia spinulosa*. *Aust. J. Bot.*, **41**, 465-480.
18. **Vaughton, G. & Carthew, S.M.** (1993) Evidence for selective fruit abortion in *Banksia spinulosa* (Proteaceae). *Biological Journal of the Linnean Society (London)* **50**, 35-46.
19. **Goldingay, R.L. & Kavanah, R.P.** (1993) Home-range estimates and habitat of the Yellow-bellied Glider (*Petaurus australis*) at Waratah Creek, New South Wales. *Australian Wildlife Research* **20**, 387-404.
20. **Carthew, S.M.** (1994) Foraging behaviour of marsupial pollinators in a population of *Banksia spinulosa*. *Oikos*, **69**, 133-139.
21. **Krauss, S.L.** (1994) Preferential outcrossing in the complex species *Persoonia mollis* R.Br. (Proteaceae) *Oecologia* **97**, 256-264.
22. **Krauss, S.L.** (1994) Restricted gene flow among the morphologically complex species *Persoonia mollis* R.Br. (Proteaceae): contrasting evidence from the mating system and pollen dispersal. *Heredity* **73**, 142-154.
23. **Vaughton, G.** (1995) No evidence for selective fruit abortion in the Australian shrub *Grevillea barklyana* (Proteaceae). *Int. J. Plant Sci.* **156**, 417-424.
24. **Krauss, S.L.** (1996) A multivariate analysis of geographic variation in morphology in *Persoonia mollis* (Proteaceae). *Plant Systematics & Evolution* **202**, 65-86.
25. **Vaughton, G.** (1996) Pollination disruption by European honeybees in the Australian bird-pollinated shrub *Grevillea barklyana* (Proteaceae). *Plant Systematics & Evolution* **200**, 89-100.
26. **Burbidge, A.H. & Baker, J.R.** (1997) Southern heathlands and the Ground Parrot. *Wingspan* **7(1)**, 11.
27. **Baker, J.R.** (1997) The decline, response to fire, status and management of the Eastern Bristlebird. *Pacific Conservation Biology*, **3**, 235-243.
28. **de Jong, N.H.** (1997) An analysis of plant communities at Coomonderry Swamp with comparisons to other wetlands on the south coast of New South Wales. *Cunninghamia*, **5**, 81-128.
29. **Krauss, S.L.** (1997) Low genetic diversity in *Persoonia mollis* (Proteaceae): a fire-sensitive shrub occurring in a fire-prone habitat. *Heredity* **78**, 41-49.
30. **Goldingay, R.L. & Carthew, S.M.** (1998) Breeding and mating systems of Australian Proteaceae. *Australian Journal of Botany* **46**, 421-437.
31. **Krauss, S.L.** (1998) A phylogeographic analysis of allozyme variation among populations of *Persoonia mollis* (Proteaceae). *Australian Journal of Botany* **46**, 571-582.
32. **Vaughton, G.** (1998) Soil seed bank dynamics in a rare, obligate-seeding shrub, *Grevillea barklyana* (Proteaceae). *Australian Journal of Ecology* **23**, 375-384.
33. **Baker, J.R. & Clarke, J.** (1999) Radio-tagging the eastern bristlebird: methodology and effects. *Corella*, **23**, 25-32.
34. **Gosper, C.R.** (1999) Plant food resources of birds in coastal dune communities in New South Wales. *Corella* **23**, 53-62.
35. **van Tets, I.G. & Hulbert, A.J.** (1999) A comparison of the nitrogen requirements of the Eastern Pygmy Possum, *Cercartetus nanus*, on a pollen and on a mealworm diet. *Physiological and Biochemical Zoology*. **72**, 127-137.
36. **Baker, J.R.** (2000) The eastern bristlebird: cover dependent and fire sensitive. *Emu* **100**, 286-298.

37. **de Jong, N.H.** (2000) Woody plant restoration and natural regeneration in wet meadow at Coomonderry Swamp on the south coast of New South Wales. *Marine and Freshwater Research*, **51**, 81-89.
38. **Goldingay, R.L.** (2000) Further assessment of pollen limitation in the waratah (*Telopea speciosissima*). *Australian Journal of Botany* **48**, 209-214.
39. **Baker, J.R.** (2001) Density and home range of Eastern Bristlebirds at Jervis Bay. *Corella* **25**, 62-67.
40. **Paltridge, R.** & Southgate, R. (2001) The effect of habitat type and seasonal conditions on fauna in two areas of the Tanami Desert. *Wildlife Research* **28**, 247-260.
41. Gibson, L. & Baker, J.R. (2004) Diet of the Eastern Bristlebird *Dasyornis brachypterus* in New South Wales. *Corella* **28**, 79-81.
42. Gosper, C.R. (2004) Fruit characteristics of invasive bitou bush, *Chrysanthemoides monilifera* (Asteraceae), and a comparison with co-occurring native plant species. *Australian Journal of Botany* **52**, 223-230.
43. Bain, D. & McPhee, N. (2005) Resurveys of the Eastern Bristlebird in central-eastern NSW, 1999-2001; their relationship with fire and observer competence. *Corella*, **29**, 1-6.

## 2. Unrefereed papers & reports

### A. Major Reports

1. **Whelan, R.J.** & Spencer, H.J. (eds) (1983) Fire Control and Management in Relation to Natural Ecosystems. *Proc. 2nd Illawarra Bushfire Conference*, University of Wollongong, NSW.
2. **Whelan, R.J.** (1983) Protection from fire of animal populations in a Nature Reserve. pp. 3-7 in: *Proc. 2nd Illawarra Bushfire Conference*. University of Wollongong, NSW
3. Roxburgh, R. & **Whelan, R.J.** (1983) Proposal for addition of Meryla Forest to Morton National Park. *National Parks and Wildlife Service, New South Wales*
4. **Whelan, R.J.** (1985) Recruitment to longleaf pine populations after fire at Goldhead Branch State Park. *Report to the Florida Department of Natural Resources, Tallahassee, Florida*
5. **Whelan, R.J.** & Goldingay, R.L. (1988) Factors limiting fruit set in Waratah. *Journal of the International Protea Society* **15**, 11-12.
6. **Whelan, R.J.** (1989) Fire and recruitment to Longleaf Pine populations at Goldhead Branch State Park: 8 years of data. *Report to the Florida Department of Natural Resources, Tallahassee, Florida*.
7. **Whelan, R.J.** (1992) Effects of bushfire on animals. *National Parks Journal*, April 1992, pp 15-17.
8. **Whelan, R.J.** & Hibberd, J. (1992) Mammals and habitat in the Bega Valley: the importance of remnant forest on private property. *National Estates Program & NSW Dept. of Planning*.
9. **Whelan, R.J.** and Ooi, M. (1991) Habitat Corridors in the Jervis Bay Area. *Report for Mitchell McCotter and Associates, Consultants*.
10. Baker, J.R. & **Whelan, R.J.** (1992) The importance of Ground Parrot fire ecology research at Barren Grounds Nature Reserve. *Report to the NSW National Parks & Wildlife Service, Nowra*.
11. **Whelan, R.J.** (1994) Wildlife populations: impact of hazard-reduction burning. In: *Looking to the Future. Proceedings of a Conference on bushfires*. Nature Conservation Council of NSW, Sydney.
12. **Whelan, R.J.** & Gregory, M. (1995) Pollen allergens and the health effects of global climate change. Report for Commonwealth Department of Health.
18. Minchinton, T. & **Whelan, R.J.** (1996) Ecological study of North Wollongong Harbour, North Wollongong Beach, Fairy Creek and lagoon, and Stuart and J.P. Galvin Parks. Wollongong City Council.

19. Brown, C. & Whelan, R.J. (1997) Ecological study of Stanwell Park Recreation Reserve and beach. Wollongong City Council.

## B. Minor Articles and Reports

1. Cannon, J.R. *et al.* (1978) Collaborative research on essential oils at the University of Western Australia. Proceedings of the Thai-UNESCO Regional Workshop on Essential Oils. Chulalongkorn University, Bangkok
2. Whelan, R.J. (1983) Pollination and Evolution. *Book Review. Australian Journal of Ecology*, **8**, 214-215.
3. Tap, P.M. & Whelan, R.J. (1984) The effect of fire on populations of heathland invertebrates. pp. 147-148 in: *Proceedings of the Fourth International Conference on Mediterranean Ecosystems (MEDECOS)*, Botany Department, University of Western Australia
4. Whelan, R.J. (1985) Fire control. Appendix in: *Illawarra Regional Park Proposal*, The Environment Centre, Wollongong
5. Whelan, R.J. (1985) Kwongan: Plant life on the Sandplain. *Book Review. Australian Journal of Ecology*.
6. Whelan, R.J. (1985) A primer on fire ecology. *The Longleaf Pine*, Newsletter, Morningside Nature Reserve, Gainesville, Florida
7. Whelan, R.J. (1987) Practical Ecology for Geography and Environmental Science. *Book Review. Australian Geographer*.
8. Whelan, R.J., Ayre, D.J. & Hulbert, A.J. (1987) Biology, creationism and the zoo. *Ohio Centre for Science Education Newsletter*, July
9. Muston, R.M. & Whelan, R.J. (1988) Factors inhibiting the return of trees to abandoned agricultural land. *Rural Research Newsletter*
10. Whelan, R.J. (1989) When is a flower visitor a pollinator - or - can a honeybee pollinate *Grevillea*? *Science Education News* **38**, 50-55.
11. Wilson, S. & Whelan, R.J. (1989) Pelt colour and escape from hawk predation by Sugar Gliders. *Proc. Royal Aust. Ornith. Union Conf., Canberra, Nov. 1989*
12. Ayre, D.J. & Whelan, R.J. (1989) Pollinators may be just a selfish bunch. *Melbourne Age*, Dec. 1989
13. Whelan, R.J. & Thompson, S. (1991) Establishment of seedlings in artificial soils. *Growback '91*, p. 92.
14. Whelan, R.J. & Muston, R.M. (1991) Reforestation of abandoned farmland in a Wollongong water catchment. *Growback '91*, p. 83.
15. Whelan, R.J. (1993) Biological Diversity. In: *The State of the Environment in Wollongong 1993*. Section 3.3. Wollongong City Council.
16. Whelan, R.J. (1994) Biodiversity. In: *The State of the Environment in Wollongong 1994*. Section 4.1. Wollongong City Council.
17. Whelan, R.J. (1997) A winning poster? *Bull. Ecol. Soc. Aust.* **26(3)**, 103-104.
20. Ayre, D.J. & Whelan, R.J. (2002) PROTEACEAE of New South Wales. *Book Review. Quarterly Review of Biology*

## 3. Commentaries on my research

### A. Popular articles and TV programs

1. ABC TV *Quantum*: 3 feature programs on research on our research on the recovery of mammals in the Royal National Park after fire (1994-95).
2. Christensen, L. (1997) Pollen-eaters and pollinators of the cute and furry kind. *Geo Australasia* **19(1)**, 28-35.

**B. Book Reviews of Whelan (1995) *The Ecology of Fire***

1. Anon. (1996) *The Ecology of Fire*. *Book Review, Bulletin of the British Ecological Society*. **November 1996**, 313.
2. Gimingham, C.H. (1996) R.J. Whelan (1995): *The Ecology of Fire*. *Book Review, Journal of Ecology*. **84**, 324-325.
3. Lamont, B.B. (1996) *The ecology of fire*. *Book review, Trends in Ecology and Evolution*. **11**, 392.
4. Moore, P.D. (1996) *Flaming nuisance?* *Book Review, Nature*, **379**, 218.
5. Ripley, M. (1996) *The Ecology of Fire (Cambridge Studies in Ecology)*. *Book Review, Biologist*. **43(4)**, 184.
6. Smith, J.K. (1996) *More questions than answers: The Ecology of Fire*. *Book Review, Ecology* **77**, 1647.
7. Trabaud, L. (1996) Whelan, R.J. *The Ecology of Fire*. *Book Review, Acta Oecologia* **16(5)**.
8. Morrison, D.A. (1997) *The Ecology of Fire*. *Book Review, Aust. J. Ecol.* **22**, 122-123.

## C. Grants & Contracts

### 1. Research Grants

<i>Year</i>	<i>Agency</i>	<i>Amount \$</i>	<i>Title of Project</i>
1983	ARGS	6,400	Role of refugia in the recovery of plant populations after fire.
1984	ARGS	10,000	Competition among plants for pollination. (Year 1)
1985	ARGS	15,300	Competition among plants for pollination. (Year 2)
1986	ARGS	15,800	Competition among plants for pollination. (Year 3)
1987	ARGS	16,000	Competition among plants for pollination. (Year 4)
1988	ARGS	16,450	Competition among plants for pollination. (Year 5)
1988	ARGS	24,000	Genetic consequences of plasticity of mating systems in the Proteaceae (with D.J. Ayre). (Year 1)
1988	Aust. Flora Foundation	1,983	Factors influencing seed-set in Waratah.
1989	ARC	27,439	Competition among plants for pollination. (Year 6)
1989	ARC	35,969	Genetic consequences of plasticity of mating systems in the Proteaceae. (Year 2)
1990	ARC	37,500	Genetic consequences of plasticity of mating systems in the Proteaceae. (Year 3)
1990	National Estate Grant	18,000	Evaluation of remnant vegetation and faunal populations in the Bega Valley (with S.E. Conservation Working Group & Kestel Research)
1991	CSIRO/UoW	8,125	Survey, classification and cataloguing of native and introduced insect visitors to flowering plants.
1992	ARC (small)	12,068	Remote estimation of plant biochemistry using a high spectral resolution, airborne visible infra-red spectrometer (with A. O'Neill).
1992	ARC	102,500	Reproductive strategies and gene flow in ascidians and plants (with D.J. Ayre and A.R. Davis) (Year 1).
1992	CSIRO/UoW	10,000	Survey, classification and cataloguing of native and introduced insect visitors to flowering plants.
1992	DEET	4,500	Environmental Science Projects in Ecology – Contribution to a National Teaching Workshop (National Priority Reserve Fund).
1993	ARC (small)	12,068	Remote estimation of plant biochemistry using a high spectral resolution, airborne visible infra-red spectrometer (with A. O'Neill).
1993	ARC	100,000	Reproductive strategies and gene flow in ascidians and plants (with D.J. Ayre and A.R. Davis) (Year 2).
1993-96	APRA-I	48,000	Soil development in artificial soils made from steelworks waste products (PhD scholarship with BHP Research, Newcastle Laboratories).
1993-4	CAUT	49,800	An interactive multimedia package for teaching experimental design skills in ecology (with B. Harper).
1994	ARC	101,000	Reproductive strategies and gene flow in ascidians and plants (with D.J. Ayre and A.R. Davis) (Year 3).
1994	NSW Dept. Health	50,000	Monitoring of pollen as a potential allergen in the Illawarra.
1994	Dept. of Health	23,100	Health effects of climate change - Climate change and pollen allergens

1994	ESAA	18,500	Minimising the impacts of powerlines on plant communities and native animals (Year 1).
1995	ARC (small)	10,000	Development of PCR RAPDs to examine population structure of <i>Grevillea barklyana</i> (Proteaceae) (with D.J. Ayre)
1995	ARC	47,000	How does season of burning affect recruitment to populations of obligate-seeder shrubs?
1995	ESAA	42,200	Minimising the impacts of powerlines on plant communities and native animals (Year 2).
1995-97	APA-I	54,000	Effects on fauna of Bitou bush infestation and its removal (PhD scholarship with NSW Public Works and NSW Agriculture).
1995-97	CALM	78,100	Illawarra Farm Forestry Project (Uni. of Wollongong component) (with Illawarra Catchment Management Committee).
1996	ARC	51,000	How does season of burning affect recruitment to populations of obligate-seeder shrubs? (Year 2)
1996	ARC	18,900	Special Initiatives Grant: Workshop on the Biology of Sustainability (with Prof. M. Westoby & Prof. R. Shine)
1997	ARC	50,000	How does season of burning affect recruitment to populations of obligate-seeder shrubs? (Year 3)
1997	ARC	46,000	Does disruption to natural pollination systems reduce plant fitness? (with D.J. Ayre) (Year 1)
1997	Illawarra CMC	5,958	Establishing research and demonstration woodlots on farms.
1997	Shoalhaven CMC	5,000	Forest-plot design and extension work - research coordination.
1998	ARC	48,000	Does disruption to natural pollination systems reduce plant fitness? (with D.J. Ayre) (Year 2)
1998	DEETYA	10,500	Integrating research with regional strategy for farm forestry in the Illawarra and Shoalhaven.
1998-99	DPIE	25,000	Development of a regional strategy for Farm Forestry in the Illawarra and Shoalhaven regions.
1998-00	APA-I	60,000	Genetic variation in soil-stored seed banks of threatened plant species (PhD scholarship with NSW National Parks & Wildlife Service).
1999	ARC	50,000	Does disruption to natural pollination systems reduce plant fitness? (with D.J. Ayre) (Year 3)
1999	ARC	45,000	Plant-animal interactions in relation to patchiness of burning. (with L. Rodgerson) (Year 1)
2000	ARC	47,000	Plant-animal interactions in relation to patchiness of burning. (with L. Rodgerson) (Year 2)
2000	ARC	50,000	Spatial and temporal variation in the pollination of <i>Grevillea</i> : implications of variation in mating systems for gene flow and fitness. (with D.J. Ayre) (Year 1)
2000-02	APA-I	126,480	Ecology and genetics of fire-sensitive <i>Persoonia</i> species: threatened species recovery and management (2 PhD scholarships with NSW National Parks & Wildlife Service and Royal Botanic Gardens).
2001	ARC	49,000	Plant-animal interactions in relation to patchiness of burning. (with L. Rodgerson) (Year 3)
2001	ARC	50,000	Spatial and temporal variation in the pollination of <i>Grevillea</i> : implications of variation in mating systems for gene flow and fitness. (with D.J. Ayre) (Year 2)
2001	ARC (LIEF)	271,000	Wilson, M. et al. (including Whelan); Equipment for Fluorescence-Based Cellular Analysis.

2001	UoW	50,000	RIBG Pool 2 Grant for a Real-time DNA Fragment Analysis System.
2002-04	APA-I	67,635	Assessing the potential for and success of animal translocations (PhD scholarship with NSW National Parks & Wildlife Service).
2002	ARC	50,000	Spatial and temporal variation in the pollination of <i>Grevillea</i> : implications of variation in mating systems for gene flow and fitness. (with D.J. Ayre) (Year 3)
2002	EPA	145,348	Native title, land rights, and biodiversity conservation in New South Wales. (Whelan, Farrier and Head)
2003-05	APA-I	69,099	Comparative ecology of common and threatened plants in fire-prone habitats
2003	ARC	60,000	Intersections between Science and Law: the implementation of threatened species legislation in Australia. (Farrier & Whelan) (Year 1)
2003	ARC	73,000	Fire, bees and other disturbances: the basis for variation in genetic diversity in long-lived plants (with D.J. Ayre) (Year 1)
2004	ARC	80,000	Intersections between Science and Law: the implementation of threatened species legislation in Australia. (Farrier & Whelan) (Year 2)
2004	ARC	68,000	Fire, bees and other disturbances: the basis for variation in genetic diversity in long-lived plants (with D.J. Ayre) (Year 2)
2005	ARC	60,000	Intersections between Science and Law: the implementation of threatened species legislation in Australia. (Farrier & Whelan) (Year 3)
2006	ARC	106,000	Why conserve genetic variation? Misdirected effort or crucial concern? (with D.J. Ayre) (Year 1)
2007	ARC	96,000	Why conserve genetic variation? Misdirected effort or crucial concern? (with D.J. Ayre) (Year 2)
2008	ARC	96,000	Why conserve genetic variation? Misdirected effort or crucial concern? (with D.J. Ayre) (Year 3)

## 2. Contracts, Consultancies and Professional Advice

1973-74	Elder Smith Goldsbrough Mort Ltd. <i>Overgrazing in the Gascoyne region of Western Australia</i>
1974	Pastoralists and Graziers Assoc. of W.A. <i>Conservation (Ch. 10 in submission to the Federal Govt. Green Paper on Agriculture)</i>
1977	Dept. of Fisheries & Wildlife of W.A. <i>Bushfire as a management technique in W.A. coastal plain reserves. In: P.A. Clay (ed.) Management Report on Thompson Lake Reserve</i>
1980-82	National Geographic Society, Publications Consultant - <i>Mammals Encyclopaedia; Strange Australian Mammals; Deserts</i>
1981	Expert Witness, Federal Court of Australia. <i>Ecological effects of fire on flora and fauna of S-W Australian forests</i>
1983	Department of Main Roads (NSW). <i>Faunal Survey: Berrima - Mittagong By-Pass</i>
1983	BHP Steel-division Collieries. <i>Ecological survey, proposed ventilation shaft</i>
1983-89	Department of Main Roads (NSW). <i>Platypus population surveys, Wingecarribee River, New South Wales</i>
1984	BHP Steel-division Collieries. <i>Ecological survey, proposed ventilation shaft</i>
1984	Edgell Pty. Ltd. <i>Identification of mammalian hair</i>

- 1984 NP&WS (New South Wales). *Barren Grounds Nature Reserve: Proposal for a fire-protection plan*
- 1987 Cleary Brothers Concrete. *Flora and fauna survey; proposed quarry extension*
- 1988 Expert Witness, NSW Land and Environment Court. *Fire and forestry in S-E New South Wales*
- 1990 State Rail Authority of NSW. *Advice on revegetation program, Helensburgh slip, South Coast Line*
- 1990 Roads & Traffic Authority (NSW) and Muston & Associates. *Faunal surveys of proposed routes for the Gerringong-Berri highway.*
- 1990 Electricity Commission (NSW). *Management plan for the endangered Yallah Orchid*
- 1990 Expert Witness, NSW Land and Environment Court, *Bushfire hazard of proposed urban development - Thirroul, NSW*
- 1991 Argyll Consultants, Canberra. *Evaluation of a bushfire hazard report for a proposed subdivision - Tarrawanna, NSW*
- 1991 BHP (Central Research Laboratories, Newcastle). *Testing of artificial soil mixes for suitability for plant growth.*
- 1991 BHP (Central Research Laboratories, Newcastle) *Monitoring of vegetation in afforested industrial land and implications for the invasion of native fauna.*
- 1991 Roads & Traffic Authority (NSW) and Muston & Associates. *Faunal survey of route of proposed Kiama by-pass.*
- 1991 Mitchell McCotter Consultants, Sydney. *Evaluation of mammal habitats and the role of habitat corridors in the Jervis Bay Region.*
- 1991 Quality Environmental Management. *Assessment of faunal significance of land proposed for urban development, Helensburgh*
- 1992 BHP (Research, Newcastle, Laboratories) *Application of steel-making slag as a lime substitute in agricultural land.*
- 1992 Mitchell McCotter Consultants, Sydney. *Faunal impact of proposed entrance works at Lake Illawarra.*
- 1992 Expert Witness, NSW Land and Environment Court, *Bushfire hazard of proposed urban development - Tarrawanna.*
- 1992 Expert Witness, NSW Land and Environment Court, *Faunal impact of proposed sand mining at Gerroa, NSW.*
- 1993 BHP (Research, Newcastle, Laboratories), *Modification of soils-substitute mix*
- 1993 BHP (Research, Newcastle, Laboratories), *Bitou Bush control study, Hill 60, Port Kembla*
- 1994 BHP (Research, Newcastle, Laboratories), *Comparison of the growth potential of artificial soils and true soils*
- 1994 ANCA and NSW National Parks & Wildlife Service, *Research management plan for the endangered Zieria bauerlenii*
- 1994 BHP (Research, Newcastle, Laboratories), *An assessment of slags as lime substitutes in the treatment of acid soils.*
- 1994 BHP (Research, Newcastle, Laboratories), *BHP envIRONment sludge analysis*
- 1994 QEM Pty. Ltd. *Evaluation of Biodiversity Strategy, NSW Roads and Traffic Authority.*
- 1994 Expert Witness, Helensburgh Commission of Enquiry - *Lady Carrington Estates Development Application. Faunal impact assessment*
- 1996 Dept. Land and Water Conservation, *Guidelines for assessment of impact of burning on threatened species and habitats. \$40,000*
- 1996 Wollongong City Council, *Ecological study for plan of management for North Wollongong. \$15,000*
- 1997 Wollongong City Council, *Ecological study for plan of management for Stanwell Park.*

- 1997-98 Illawarra & Shoalhaven Catchment Management Committee. *Development of a Farm Forestry Industry in the Illawarra and Shoalhaven Region*. \$65,000
- 2003 Sydney Catchment Authority & NSW National Parks & Wildlife Service. *Peer review of research priority project; "Special Areas" Program*. \$6,000
- 2005 NSW Dept. of Environment & Conservation. *Assessment of Bushfire and Fire Mitigation Effects on Native Fauna*. \$10,000
- 2005 Department of Environment & Heritage. 'Bushfires'. Cross-cutting Commentary for 2006 *State of the Environment Report*. \$40,000.
- 2005-10 NSW Department of Environment and Conservation. Centre for the Environmental Risk Management of Bushfires. \$865,000.

## D. Supervision of Research Students

### 1. Student thesis research

(†represents joint supervision)

**Honours** (including both BSc and Env. Sci. full-year Honours)

<i>Name</i>	<i>Completed</i>	<i>Grade</i>	<i>Topic of Research</i>
1. J. Erskine	1984	Class IIA	Role of fire and other factors influencing the distribution of rain-forest patches in the Illawarra
2. R.T. Ballardie	1984	Class IIA	Matting, seed dispersal and seed predation in <i>Macrozamia communis</i>
3. D. Porteous†	1986	Class I	Ecological and chemical effects of land disposal of secondary-treated sewage effluent
4. A. Hunt†	1987	Class I	Competition, spatial distribution and mode of reproduction in the intertidal anemone <i>Oulactis</i>
5. F. Harriss	1987	Class IIA	Plasticity of mating systems in Proteaceous shrub, <i>Grevillea barklyana</i>
6. M. Andren†	1988	Class I	The woodchip debate: a study of an environmental controversy
7. D. Sutton	1988	Class IIB	The importance of <i>Banksia spinulosa</i> in the diet of the marsupial mouse, <i>Antechinus stuartii</i>
8. E. Telford†	1989	Class IIA	The importance of seed dispersal and the soil seed bank in natural revegetation of disturbed forests
9. D. Engel	1990	Class IIB	Plant-herbivore interactions in relation to fire in Hawkesbury Sandstone vegetation (Env. Sci. Honours)
10. W. Edwards	1990	Class I	Seed bank dynamics of a threatened plant species: <i>Grevillea barklyana</i> at Jervis Bay. (Env. Sci. Honours)
11. G. Phillipson†	1990	Class IIA	The effect of disturbance on the structure of a rainforest community.
12. N. De Jong	1990	Class I	The seed bank and potential for recruitment in <i>Banksia serrata</i> in unburned sites (part-time).
13. M. Henderson	1991	Class IIA	Cross-pollination and hybridization between two <i>Banksia</i> species.
14. S. von der Burg	1991	Class IIA	Variation in the degree of bradyspory among populations of <i>Banksia serrata</i> .
15. P. Fox	1991	Class IIB	Assessment of the natural resources of an urban wetland system and recommendations for management. (Env. Sci. Honours)
16. K. Willis†	1992	Class IIB	Toxic dinoflagellates in Lake Illawarra: biology and distribution
17. M. Gregory	1992	Class I	Relative effectiveness of honeybees and native insects as pollinators.
18. S. Ward	1994	Class IIA	Effects of wildfire on small mammals.
19. J. Gay†	1995	Class I	Bacterial induced leaching in slag waste emplacements.
20. C. Brown	1996	Class IIA	Fire season and seed viability in <i>Hakea</i> and <i>Petrophile</i>
21. J. Wasley	1997	Class I	Resprouting and release from seed dormancy after fire in endangered <i>Persoonia</i> species.
22. J. Picthall†	1997	Class IIA	Seed bank dynamics of endangered species of Proteaceae.

23. S. Lloyd <sup>†</sup>	1998	Class I	Responses of pollinators to variation in plant floral characteristics.
24. A. Usher <sup>†</sup>	1998	Class IIA	Using microsatellites to track pollen movement in plant populations.
25. T. Barratt	1999	Class IIA	Pollination and fruit set in an endangered plant, <i>Zieria baeuerlenii</i> . (part time)
26. M. Russell	1999	Class IIA	Collecting relevant data to ensure biodiversity conservation in fire management planning (Wollongong City Council Scholarship).
27. D. Roberts	2001	Class 1	Genetic diversity of national park and adjacent garden populations of a rare plant.
28. M. Larkin	2004	Class 1	Effect of alpine fires on <i>Eucalyptus delegatensis</i> regeneration.
29. V. Bennett	2006	current	Impact of powerline easements on movements of <i>Antechinus stuartii</i> .

### Environmental Science Honours (half-year projects)

<i>Name</i>	<i>Completed</i>	<i>Grade</i>	<i>Topic of Research</i>
1. C. Hammersley	1993	Class 3	Status and prospects for wetlands in the Sutherland Sire, NSW.
2. P. Mooney	1994	Class I	Fire frequency and the density of woody shrubs in swamp communities.
3. T. Patel	1994	Class IIA	Roadside plant communities roadkills of wombats on the Hume Highway.
4. L. Bogie	1994	Class IIB	Effects of fire frequency on the accumulation of fuels in Water Board forests.
5. S. Hill	1996	Class IIA	Revegetation of seismic lines .
6. M. Guy	1996	Class IIB	Relative effectiveness of hair tubes and other mammal survey techniques.
7. Z. Dokonal	1996	Class IIB	Factors affecting growth and reproduction of the endangered Illawarra Greenhood orchid.
8. S. Maloney	1997	Class IIA	Degree of disturbance to native vegetation caused by seismic lines.
9. E. Heylin	1997	Class I	The role of fire in the demography of the endangered orchid, <i>Pterostylis gibbosa</i> . ( <b>Howard Worner Prize</b> for best Honours performance in 1997)
10. I. Taylor	1998	Class IIA	Pollination ecology and herbivory in the management of the endangered orchid, <i>Pterostylis gibbosa</i> .
11. M. Pickup	1999	Class I	Fire responses of the threatened Carrington Falls Grevillea: <i>G. rivularis</i> . [ <b>University Medal 1999</b> ]
12. B. Wolhuter	1999	Class IIA	Potential for soil seed banks to contribute to native plant restoration of the Five Islands Nature Reserve.
13. K. Visman	2000	Class 1	Fire responses of the endangered Illawarra Greenhood Orchid ( <i>Pterostylis gibbosa</i> ).
14. J. Coyte	2001	Class IIB	Management of threatened plant species in Wingecarribee Swamp, NSW.
15. J. Walsh	2001	Class 1	Habitat and host associations of the dieback fungus <i>Phytophthora cinnamomi</i> at Royal National Park.
16. D. Clunas	2002	Class IIA	Reproductive success and fire responses of the rare legume, <i>Pultinaea villifera</i> .
17. A. Baker	2002	Class IIA	Assessment of the conservation significance of isolated urban-fringe bushland in the Shoalhaven.

18. J. Millott	2003	Class IIA	Taxonomy and conservation status of <i>Pomaderris</i> "Carrington Falls".
19. R. Loemker	2004	Class 1	Modelling impacts of fire hazard reduction on the endangered Eastern Bristlebird
20. L. Collins	2005	Class 1	Biodiversity impacts of bushfire mitigation in the Shoalhaven region, NSW.
21. K. Grarock	2006	current	

### Research Masters

Name	Completed	Topic of Research
1. N.H. Robinson	1987	The effects of European Man on the distribution and abundance of mammals in the Illawarra.
2. B.J. Copland	1987	Flowering phenologies and factors regulating reproductive success in <i>Banksia</i> species.
3. J. Baker	to PhD 1995	Ecology, behaviour and habitat requirements of threatened bird species – the eastern bristlebird.
4. P. Glass	1994	Habitat associations of insectivorous bat species and the impact of logging.
5. D. Black <sup>†</sup>	1995	Vegetation pattern and process: Morton National Park and the Buddawang.
6. L. Gibson	1999	Assessment of potential for reintroduction of eastern bristlebirds: the role of diet. (Env. Sci. Masters)
7. B. Baird	2000	Recruitment of eucalypts in powerline easements with and without a shrub cover. (Env. Sci. Masters)
8. A. Sugawara	2001	Land capability study for farm forestry in the Illawarra/ Shoalhaven region of NSW (M. Env. Sci. (Hons))
9. M. Ooi	2002	Fire responses of a fire-sensitive <i>Leucopogon</i> .
10. D. Andrew	2006	Ecology and habitat associations of the spotted-tailed quoll in south-eastern Australia.
11. G. Basnett	2006	Predicting effects of fuel-reduction burning on mammal and bird habitats at Coolah Tops National Park.
12. S. Maloney	current	Status of the Greater Glider in the Illawarra region.

### PhD

Name	Completed	Topic of Research
1. R.M. Muston <sup>†</sup>	1988	Long-term fire effects in a Hawkesbury Sandstone plant community.
2. R.L. Goldingay	1989	Ecology of the Yellow-bellied Glider in s-e Australian forests.
3. S.M. Carthew <sup>†</sup>	1990	Influence of pollination on mating systems of <i>Banksia spinulosa</i> .
4. S. Bellgard	1992	Mycorrhizae and recolonisation of plants after disturbance
5. S. Schibeci <sup>†</sup>	1994	Pollination and ecological genetics of two hybridizing <i>Banksia</i> species.
6. S. Krauss <sup>†</sup>	1994	Population biology and taxonomy of the <i>Persoonia mollis</i> complex.
7. P.M. Tap	1996	Effects of fire on ground-dwelling invertebrates in heath.
8. I. van Tets	1996	Physiological and anatomical adaptations of vertebrates to a nectar-and-pollen diet.
9. N. de Jong	1997	The vegetation ecology of a coastal freshwater wetland.
10. S. Wilson <sup>†</sup>	1998	Measures of well-being in feed-lot cattle.

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|--------------------------------|---------|---|
| 11. J. Baker <sup>†</sup>      | 1998    | Ecology, behaviour and habitat requirements of threatened bird species - Eastern Bristlebird                    |
| 12. C. Brown <sup>†</sup>      | 2002    | Science meets the Law: ecological research needs in threatened species management and legislation.              |
| 13. T. Celebrezze <sup>†</sup> | 2002    | Honeybees and their interaction with native plants and pollinators  |
| 14. T. Llorens <sup>†</sup>    | 2004    | Is the soil-stored seed bank a store of genetic diversity in threatened Proteaceae species? (APA-Industry).     |
| 15. C. Gosper <sup>†</sup>     | 2004    | Faunal response to Bitou Bush and its removal. (APA-I)  |
| 16. R. Paltridge               | 2005    | Effects of predators on mammals of the Tanami desert.   |
| 17. P. Rymer <sup>†</sup>      | 2006    | Conservation genetics of sympatric common and rare <i>Persoonia</i> species. (APA-I)                            |
| 18. S. Heemstra <sup>†</sup>   | 2006    | Measurement and long-term nature of patchiness in bushfires. (submitted)  |
| 19. S. Lloyd <sup>†</sup>      | 2006    | Ecological consequences of variation in reproductive effort between plants in a population. (under examination) |
| 20. E. Hannah                  | 2006    | Factors limiting restoration of landfill sites in western Sydney. (under examination)                           |
| 21. D. Bain <sup>†</sup>       | 2006    | Translocation of eastern bristlebirds (APA-Industry).   |
| 22. D. McKenna <sup>†</sup>    | current | Fire responses and demographic modelling of sympatric common and rare <i>Persoonia</i> species. (APA-I)         |
| 23. A. Usher <sup>†</sup>      | current | Genetic and ecological processes in plant hybrid zones.   |
| 24. T. Strevens                | current | Responses of native fauna to powerline easements and to environmentally sensitive management actions.           |
| 25. A. Pares                   | current | Interactions between fire, soil and plant recruitment.  |