SCIENCE COMMUNICATIONS

October 2004-February 2005

Science Division Mission: The provision of up-to-date and scientifically sound information to uphold effective conservation and land management in Western Australia http://calmweb.calm.wa.gov.au/drb/science/index.html

Science Communications lists titles of publications, reports etc prepared by Science Division staff. This issue is for the period October 2004 to February 2005. If you require a copy of a **submitted** paper please contact the author. For all other titles please contact Lisa Wright at Woodvale.

Neil Burrows Director

Journal Publications

- Abbott, I. (2004). Aborigines, settlers and native animals: a zoological history of the south-west. *Early Days* **12.** pp. 231-249.
- Barrett, B. (2004). The plight of the elusive western ground parrot. *PsittaScene* **16.** p. 7
- Blinn, D.W., Halse, S.A., Pinder, A.M., Shiel, R.J. and McRae, J. (2004). Diatom and micro-invertebrate communities and environmental determinants in the western Australian wheatbelt: a response to salinization. *Hydrobiologia* **528.** pp. 229-248.
- Broadhurst, L., Byrne, M., Craven, L. and Lepschi, B. (2004). Genetic congruence with new species boundaries in the *Melaleuca uncinata* complex (Myrtaceae). *Australian Journal of Botany* **52.** pp. 729-737.
- Bullen, R. and McKenzie, N.L. (2004). Bat flight-muscle mass: implications for foraging strategy. *Australian Journal of Zoology* **52.** pp. 605-622.
- Byrne, M. (2004). Recognition of *Eucalyptus quaerenda* (Myrtaceae) at specific rank. *Nuytsia* **15.** pp. 321-323.
- Clarke, A., Muir, B., Elscot, S. and Lane, J. (2004). Banded stilt breeding attempt at Lake Disappointment. *Stilt* **46.** p. 39
- Cranfield, R.J. (2004). *Grevillea bipinnatifida* subsp. *pagna* (Proteaceae), a new subspecies from south-west Western Australia. *Nuytsia* **15.** pp. 187-192.
- Cranfield, R.J. (2004). Lichen census of Western Australia. *Nuytsia* **15.** pp. 193-220.

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- Davis, R.W. (2004). Two new species of *Ptilotus* (Amaranthaceae) from Western Australia. *Nuytsia* **15.** pp. 221-226.
- Hopper, S.D. and Gioia, P. (2004). The southwest Australian floristic region: evolution and conservation of a global hot spot of biodiversity. *Annual Review of Ecology, Evolution and Systematics* **35.** pp. 623-650.
- Kay, W.R. (2004). Movements and home ranges of radio-tracked *Crocodylus porosus* in the Cambridge Gulf region of Western Australia. *Wildlife Research* **31.** pp. 495-508.
- Kay, W.R. (2004). A new method for attaching electronic devices to crocodilians. Herpetological Review **35.** pp. 354-357.
- Keighery, G. (2004). A new species of *Bulbine* (Asphodelaceae) from Western Australia. *Nuytsia* **15.** pp. 241-244.
- Keighery, G. (2004). Taxonomic notes on the *Angianthus drummondii* complex (Asteraceae: Gnaphaliinae). *Nuytsia* **15.** pp. 253-260.
- Keighery, G. (2004). A taxonomic review of the genus *Agrostocrinum* (Phormiaceae). *Nuytsia* **15.** pp. 245-252.
- Keighery, G. (2004). Taxonomy of the *Calytrix ecalycata* complex (Myrtaceae). *Nuytsia* **15.** pp. 261-268.
- Lamont, B.B., Wittkuhn, R. and Korczynskyj, D. (2004). Turner review. No. 8: Ecology and physiology of grasstrees. *Australian Journal of Botany* **52.** pp. 561-582.
- Lepschi, B.J., Trudgen, M.E. and van Leeuwen, S.J. (2004). Two new species of *Dampiera* (Goodeniaceae) from the Pilbara region, Western Australia. *Nuytsia* **15.** pp. 269-276.

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- Lewington, M. (2004). Correction of type locality and flowering time for *Melaleuca apostiba* (Myrtaceae). *Nuytsia* **15.** p. 324
- Mills, H.R., Moro, D. and Spencer, P.B.S. (2004). Conservation significance of island versus mainland populations: a case study of dibblers (*Parantechinus apicalis*) in Western Australia. *Animal Conservation* **7.** pp. 387-395.
- Science Division, Department of Conservation and Land Management, Western Australia (2004). Nuytsia. Vol. 15, no. 2. Department of Conservation and Land Management, Western Australia, pp. 157-330.
- Wheeler, J.R. (2004). An interim key to the Western Australian species of *Hibbertia* (Dilleniaceae). *Nuytsia* **15.** pp. 311-320.
- Wheeler, J.R. (2004). Miscellaneous new *Hibbertia* species (Dilleniaceae) from the south coast and adjacent interior of Western Australia. *Nuytsia* **15.** pp. 299-310.
- Wheeler, J.R. (2004). Nomenclatural notes on two species of *Hibbertia* (Dilleniaceae). *Nuytsia* **15.** pp. 327-328.
- Wheeler, J.R. (2004). A review of *Hibbertia hemignosta* and its allies (Dilleniaceae) from Western Australia. *Nuytsia* **15.** pp. 277-298.
- Wildy, D.T., Pate, J.S. and Bartle, J.R. (2004). Budgets of water use by Eucalyptus kochii tree belts in the semi-arid wheatbelt of Western Australia. *Plant and Soil* **262.** pp. 129-149.
- Wildy, D.T., Pate, J.S. and Sefcik, L.T. (2004). Water-use efficiency of a mallee eucalypt growing naturally and in short-rotation coppice cultivation. *Plant and Soil* **262.** pp. 111-128.
- Wills, A.J., Burbidge, T.E. and Abbott, I. (2004). Impact of repeated defoliation on jarrah (*Eucalyptus marginata*) saplings. *Australian Forestry* **67.** pp. 194-198.

Books

- Abbott, I. and Burrows, N. (2004). Monitoring biodiversity in jarrah forest in south-west Western Australia: the ForestCheck initiative. In: Conservation of Australia's Forest Fauna. 2nd ed. (ed. D. Lunney). Royal Zoological Society of New South Wales, Sydney. pp. 947-958.
- Coates, D.J. and Byrne, M. (2005). Genetic variation in plant populations: assessing cause and pattern. In: *Plant Diversity and Evolution: Genotypic and Phenotypic Variation of Higher Plants* (ed. R.J. Henry). CAB International, Wallingford. pp. 139-164.

- Pinder, A.M. (2004). Annelida: Aphanoneura. In: Freshwater Invertebrates of the Malaysian Region (eds C.M. Yule & Y.H. Sen). Academy of Sciences Malaysia, Kuala Lumpur. pp. 191-193
- Pinder, A.M. (2004). Annelida: Clitellata, Oligochaeta. In: *Freshwater Invertebrates of the Malaysian Region* (eds C.M. Yule & Y.H. Sen). Academy of Sciences Malaysia, Kuala Lumpur. pp. 162-174.
- Whitford, K. and Stoneman, G. (2004).

 Management of tree hollows in the jarrah,

 Eucalyptus marginata, forest of Western

 Australia. In: Conservation of Australia's Forest

 Fauna. 2nd ed. (ed. D. Lunney). Royal

 Zoological Society of New South Wales,

 Sydney. pp. 807-829.

Conference/Workshop Papers

- Burrows, N.D. and Wardell-Johnson, G. (2004). Implementing fire mosaics to promote biodiversity and reduce the severity of wildfires in south-west Australian ecosystems. In: 11th Annual AFAC Conference and Inaugural Bushfire CRC Conference, 7-9 October 2004, Perth, Western Australia pp. 1-9.
- Byrne, M. and Millar, M. (2004). Genetic systems and issues in the development of woody perennials for revegetation. In: *Proceedings of the Conference, Salinity Solutions: Working with Science and Society, 2-5 August, 2004, Bendigo, Victoria* (eds A. Ridley, P. Feikema, S. Bennet, M.J. Rogers, R. Wilkinson & J. Hirth). CRC for Plant-Based Management of Dryland Salinity, Perth. pp. 1-5.
- George, N., Byrne, M. and Yan, G. (2004). Preliminary observations of the reproductive biology of Acacia saligna. In: Proceedings of the Conference, Salinity Solutions: Working with Science and Society, 2-5 August, 2004, Bendigo, Victoria (eds A. Ridley, P. Feikema, S. Bennet, M.J. Rogers, R. Wilkinson & J. Hirth). CRC for Plant-Based Management of Dryland Salinity, Perth. pp. 1-4.
- Halse, S.A. (2004). Impacts of drainage disposal on biodiversity in wetlands of the Western Australian wheatbelt. In: Engineering Salinity Solutions: 1st National Salinity Engineering Conference, 2004: Conference Proceedings: 9-12 November 2004, Burswood International Resort, Perth, Western Australia (eds S. Dogramaci & A. Waterhouse). Institution of Engineers, Australia, Canberra. pp. 373-378.

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- Keighery, G. (2004). Impact of weeds on our WA plant biodiversity (Internet URL: http://www.everlastingconcepts.com.au/HTML/summerhandouts.htm (15 Feb 2005)). In: Everlasting Concepts Four Season Seminars (Summer Seminar, WA Plants: Exposing the Myths), January 20 and 21, 2004, Edith Cowan University, Joondalup Campus Everlasting Concepts, Perth. 7 p.
- Meyer, C.P., Müller, J.F., Beer, T., Tolhurst, K., McCaw, L., Cook, G.D., Ivory, A. and Mobbs, C. (2004). Dioxin emissions from bushfires in Australia: paper to be presented at the 17th International Clean Air and Environment Conference, Hobart, 2005. Department of Conservation and Land Management, Western Australia, 6 p.

Abstracts

- Burrows, N.D. (2004). Implementing fire mosaics to prevent large wildfires and enhance ecosystem health (ABSTRACT). In: Are we Prepared for Future Challenges?: Program & Abstracts: the 11th Annual AFAC Conference and Inaugural Bushfire CRC Conference, 7-9th October 2004, Perth, Western Australia Conference Secretariat, West Perth. p. 42
- Gould, J.S. and McCaw, L. (2004). Risk and behaviour of fires in hardwood plantations (ABSTRACT). In: Are we Prepared for Future Challenges?: Program & Abstracts: the 11th Annual AFAC Conference and Inaugural Bushfire CRC Conference, 7-9th October 2004, Perth, Western Australia Conference Secretariat, West Perth. p. 49
- Monks, L. Translocation of threatened plants in Australia. In: 17th Annual Conference of the Australasian Management Society
- Neaves, L., Zenger, K., Prince, B., Beveridge, I., Snaith, E. and Cooper, D. (2004). Does hybridisation of eastern grey kangaroos and western grey kangaroos occur in the wild: a microsatellite study. In: Australasian Wildlife Management Society, 17th Scientific Meeting and AGM, Kingscote, Kangaroo Island, South Australia: 29 November-2 December 2004: AWMS Conference Abstracts Australasian Wildlife Management Society, Melbourne. p. 109

Reports

Burrows, N. (2004). Review of Science Project Plans (SPPs): summary of outcomes: meeting held in Yanchep, 20-22 September 2004. Department of Conservation and Land Management, Western Australia, 7 p.

- Coates, D.J., Byrne, M., MacDonald, B., Hankinson, M. and Ward, J. (2004). Genetic structure in the priority one species *Genus* sp. *Yalgoo* (J.M.Ward s.n. 11/7/1999). Department of Conservation and Land Management, Western Australia, 9 p.
- De Tores, P. (2004). A proposal for translocation of the western ringtail possum, *Pseudocheirus occidentalis*, an arboreal marsupial endemic to the south-west of Western Australia.

 Department of Conservation and Land Management, Western Australia, 19 p.
- Reid, T. (2004). Science Division 2004 Biennial Forum: program theme, Connections, 10-11th June, 2004, Muresk Institute of Agriculture Conference Centre: wash up report. Department of Conservation and Land Management, Western Australia, 15 p.
- Science Division, Department of Conservation and Land Management, Western Australia (2004). Business plan, July 2004-June 2006. Department of Conservation and Land Management, Western Australia, 29 p.
- Science Division, Department of Conservation and Land Management, Western Australia (2004). ForestCheck: report of progress, 2003-2004. Department of Conservation and Land Management, Western Australia,
- Smith, J.A., Wright, L.J. and Morris, K.D. (2004). BiblioBarrowlsland: an annotated bibliography of the natural history of Barrow Island, 1622-2004. Department of Conservation and Land Management, Western Australia, 83 p.
- Spooner, A. (2004). Procedures for updating the plant of the month webpage: user's guide. Version 1.0, May 2004. Department of Conservation and Land Management, Western Australia, 8 p.
- Thomas, N., Macmahon, B., Marlow, N. and Friend, T. (2004). Return to Dryandra: reintroduction of the boodie and dalgyte to Dryandra: progress report, June 2004. Department of Conservation and Land Management, Western Australia, 9 p.
- Thomas, N., Marlow, N., Macmahon, B. and Friend, T. (2004). Return to Dryandra: field breeding centre progress report, June 2004. Department of Conservation and Land Management, Western Australia, 11 p.
- Tutt, M., Fekete, S., Mitchell, S., Brace, P. and Pearson, D. (2004). Unravelling the mysteries of Pilbara olive python ecology: Threatened Species Network community grants final report, Project WA11/101. Nickol Bay Naturalists' Club, Karratha. 42 p.

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- Whitford, K., Stoneman, G. and Mellican, A. (2004). Effect of stand density and fertilizing on seed-fall: final report. Department of Conservation and Land Management, Western Australia, 45 p.
- Wright, L., Richardson, B. and Mathiesen, B. (2004). Copyright policy. Department of Conservation and Land Management, Western Australia, 12 p.

Popular (Landscope, Newsletters, Letters, etc.)

- Barrett, B. (2004). History turns another corner for the western ground parrot. *Western Australian Bird Notes* **112.** pp. 14-15.
- Barrett, B. (2004). A riddle is no joke. Western Wildlife: Newsletter of the Land for Wildlife Scheme **9(1)**. pp. 14-15.
- Burbidge, A. and Mather, S. (2004). Western Australian bird notes: quarterly newsletter of Birds Australia Western Australia Inc. No. 112, December 2004. 36 p.
- Cochrane, A. Ex situ germplasm conservation as a means of biodiversity conservation in salinising landscapes. *Australasian Plant Conservation*
- Cochrane, A. (2004). Seed bank pays dividends. *Landscope* **20(2).** pp. 27-31.
- Cranfield, R. (2004). Strange parasite. Western Wildlife: Newsletter of the Land for Wildlife Scheme **8(4).** p. 8
- Keighery, G. (2004). Balaustion (native pomegranates). Australian Plants 22. pp. 272-273
- Keighery, G. (2004). Ironstone communities of south-western Australia [PowerPoint Presentation]. In: *Busselton Ironstone Workshop, November 2004* Department of Conservation and Land Management, Western Australia, CD-ROM
- Keighery, G. and Keighery, B. (2004). Not all thistles are weeds. *Landscope* **20(2).** pp. 49-54.
- Maslin, B. and Orchard, T. (2004). Most Australian wattles likely to remain Acacia. Western Wildlife: Newsletter of the Land for Wildlife Scheme 8(4). pp. 4-5.
- Monks, L., Spencer, M. and Grant, A. (2004).
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 -2004 [PowerPoint Presentation]. In: Busselton Ironstone Workshop, November 2004
 Department of Conservation and Land
 Management, Western Australia, CD-ROM

Rooney, J.F. (2004). A guide to living with snakes in the south west (Warren region), Western Australia (PAMPHLET). Department of Conservation and Land Management, Western Australia, 12 p.

Submitted

- Abbott, I. An overlooked record of the malleefowl in the interior of Western Australia. Western Australian Naturalist
- Burbidge, A. What was the Jarnadup bristlebird?. Records of the Western Australian Museum
- Coates, D.J., Patrick, S. and Butcher, R. Drummond to DNA: evolutionary patterns and conservation of the southwest flora. *Curtin University of Technology, Department of Environmental Biology, Bulletin*
- Cochrane, A., Crawford, A., Coates, D., Dixon, K., Sweedman, L., Batty, A. and Pearce, T. Millenium Seed Bank Project in Western Australia: achievements, 2001-2004 (PAMPHLET).
- Cochrane, A., Crawford, A., Coates, D., Dixon, K., Sweedman, L., Batty, A. and Pearce, T. Millenium Seed Bank Project. Phase 1 achievements, 2001-2004 (POSTER).
- Elliott, C.P. and Brown, A.P. Drummond and his passion for orchids. *Curtin University of Technology, Department of Environmental Biology, Bulletin*
- Gibson, N. Reinstatement and lectotypification of Patersonia occidentalis R.Br. var. angustifolia Benth. (Iridaceae). Nuytsia
- Harvey, M.S., Waldock, J.M., Guthrie, N.A., Durrant, B.J. and McKenzie, N.L. Patterns in the composition of ground-dwelling araneomorph spider communities in the Western Australian wheatbelt. In: *Ecological Society of Australia Conference, Adelaide, December 2004*
- Maslin, B.R. and George, A.S. James Drummond's *Acacia* collections from southwest Western Australia. *Curtin University of Technology, Department of Environmental Biology, Bulletin*
- Maslin, B. and Orchard, T. Proposed name changes for *Acacia* and how these might affect Australian species. *Australian Plants*
- Maslin, B. and Orchard, T. Response to Pedley's paper titled Another view of *Racosperma*, published in *Acacia* Study Group Newsletter 90, 3-5 (2004). *Acacia Study Group Newsletter*

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Pearson, D., Shine, R. and Williams, A. Spatial ecology of a threatened python (*Morelia spilota imbricata*) from south-western Australia. *Austral Ecology*

Robinson, R.M. *Armillaria* root disease: fact sheet, management of *Armillaria* root disease [Science Division web site].

Robinson, R. and Seymour, A. (2004). Stump pulling to control *Armillaria* root disease following the first thinning of regrowth karri. Forest Products Commission, Perth. p. 1

Shearer, B.L., Crane, C.E., Spadek, Z.E., Aukland, C., Saw, R., Scott, P. and Hardy, G.E. St. J. Optimising phosphite prescriptions for the protection of threatened communities from *Phytophthora cinnamomi*. *Dieback Information Group Newsletter*

Shearer, B.L., Fairman, R.G. and Grant, M.J. Effective concentration of phosphite in controlling *Phytophthora cinnamomi* following stem injection of *Banksia* species and *Eucalyptus marginata*. Forest Pathology

Wayne, A.F., Cowling, A., Rooney, J.F., Ward, C.G., Wheeler, I.B., Donnelly, C.F., Lindenmayer, D.B. and Burrows, N.D. Improving spotlight efficiency: factors affecting the detection of possums in Western Australia. Wildlife Research

Science Project Plans

The following were recently approved:

Supervising scientists: Ian Abbott & Allan Wills

Project: Native earthworms (Oligochaeta) of the Swan Coastal Plain: biodiversity, distribution and threatening processes.

Supervising scientist: Margaret Byrne Project: SPP 2004/006 - Management of weed risk in perennial landuse systems.

Supervising scientist: Norm McKenzie Project: SPP 2004/002 - A survey of the biodiversity of terrestrial, aquatic and groundwater habitats of the Pilbara IBRA Bioregion.

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