

pose a major problem for managers of private and public lands within the climatic range of the *Rubus fruticosus* L. aggregate. An estimated 8.8 m ha of infestations occur throughout Australia, with consequences which vary in type and significance depending on the characteristics of the site and the preferred land use.

At this stage it is not considered necessary to undertake additional economic work on blackberry. This is because of the unambiguous nature of the biophysical significance of blackberry infestations (and therefore the presumed continuation of funding for the current biological control research), coupled with the costs of updating and improving the accuracy of the current valuation of economic losses as a consequence of those infestations.

If the research programs on biological control currently underway are threatened by lack of funding, or new programs are considered necessary, it would be appropriate to develop current estimates of the costs of this significant weed. Appropriate approaches to the development of estimates of the cost of blackberry would include the use of partial and inverse economic analyses.

## References

- Amor, R.L. (1971). A study of the ecology and control of blackberry (*Rubus fruticosus* L. agg.). Ph.D. thesis, Monash University, 229 pp.
- Bayley, W.A. (1962). 'Blackberries in Australia'. (Illawarra Historical Society, Wollongong, New South Wales).
- Bruzzese, E. and Lane, M. (1996). 'The blackberry management handbook', 49 pp. (Keith Turnbull Research Institute, Frankston).
- Carr, G.W., Yugovic, J.V. and Robinson, K.E. (1992). 'Environmental weed invasions in Victoria', 78 pp. (Department of Conservation and Natural Resources, and Ecological Horticulture Pty. Ltd., Melbourne).
- Common, M. (1997). The value of environmental valuation? Proceedings of the 2nd ANZSEE Conference, Melbourne.
- Cullen, J.M. (1984). Bringing the cost benefit analysis of biological control of *Chondrilla juncea* up to date. Proceedings of the VIth International Symposium of Biological Control of Weeds, 19-25 August 1984, Vancouver, Canada, ed. E.S. Delfosse, pp. 145-52. (Agriculture Canada).
- Date, E.M., Recher, H.F., Ford, H.A. and Stewart, D.A. (1996). The conservation and ecology of rainforest pigeons in northeastern New South Wales. *Pacific Conservation Biology* 2, 299-308.
- Field, R.P. and Bruzzese, E. (1984). Biological control of blackberry. Unpublished Report 1984/2, Keith Turnbull Research Institute, Department of Conservation, Forests and Lands, Frankston, 100 pp.
- Humphries, S.E., Groves, R.H. and Mitchell, D.S. (1991). Plant invasions of Australian ecosystems: a status review and management directions. *Kowari* 2, 1-134.
- James, R.F. (1991). The valuation of wetlands: approaches, methods and issues. PHPA/AWB Sumatra Wetland Project Report No. 29. Asian Wetland Bureau - Indonesia and Directorate-General of Forest Protection and Nature Conservation, Department of Forestry, Bogor, 95 pp.
- Lubulwa, G. and McMeniman, S. (1997). An economic evaluation of realized and potential impacts of 15 of ACIAR's biological control projects (1993-1996): some preliminary estimates. Working Paper No. 26, Economic Evaluation Unit, ACIAR, Canberra, 39 pp.
- Ray, A. (1984). 'Cost-benefit analysis: Issues and methodologies', 158 pp. (Published for the World Bank by The Johns Hopkins University Press).
- Stahle, P. (1997). Evaluation of the efficacy of selected biological control agents for environmental weeds. Blackberry and boneseed/bitou bush: 2 Case studies. Biodiversity Group, Environment Australia, Canberra, 33 pp.
- Taylor, McC. (1992). 'Birds of the Australian Capital Territory: An atlas', 227 pp. (Canberra Ornithologists Group Inc. and the National Capital Planning Authority, Canberra).
- Vere, D.T. and Holst, P.J. (1979). The economics of using goats to control *Rubus fruticosus*. Proceedings of the 7th Asian Pacific Weed Science Conference, pp 207-9.
- Von Pein, J.R. (1961). Blackberry controlled with goats and electric fence. *New Zealand Journal of Agriculture* 103, 535.

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## Impact of blackberry on an endangered species

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### Summary

A few rare or threatened plant species, e.g. *Grevillea iaspicula*, *G. wilkinsonii*, *Discaria nitida* and *Astelia australiana*, are known to have at least some populations under threat through habitat invasion by blackberry. This contribution focused on the threats posed to the nationally endangered *G. iaspicula* by blackberry invasion of its habitat. *G. iaspicula* is a shrub confined to limestone outcrops in the Wee Jasper area of New South Wales, where it survives at seven sites and has a total population of less than 250 mature plants. Five populations are located on private land and two are on public land. Browsing by domestic stock and land clearing have been the major past threats to survival of this species. The remnant populations are

threatened currently by rampant invasion of habitat by blackberry and sweet briar (*Rosa rubiginosa*). Of the \$18 000 spent on recovery actions for this species, it is estimated that more than \$5000 has gone to the control of the woody weeds blackberry and sweet briar. The various problems encountered by the NSW National Parks and Wildlife Service and the *Grevillea iaspicula* Recovery Team in achieving satisfactory control of these woody weeds were discussed.