

Healthy Rivers, Healthy Communities
Presenting current research in the Goulburn Broken Catchment

Research Case Study: Restoration ecology in streams and looking forward

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Abstract:

Restoration ecology seeks to apply ecological principles to restoration and to use restoration to further our understanding of how to rebuild populations, communities and ecosystems. Most restoration projects have, either explicitly or implicitly, ecological goals and many seek to produce a resilient form of ecological sustainability. Planning restoration projects must take into full consideration the stream system (including headwater streams), the catchment and the riparian zone. To advance restoration ecology, we need to form reliable partnerships with resource management agencies so that empirical results from selected critical projects. Such projects require goal setting, monitoring and evaluation; possibly in an adaptive management framework. Unfortunately, at present, adequately monitored projects are rare. Even if a project is judged a “failure”, with monitoring valuable insights may be unearthed. Many current projects are small-scale, poorly designed and unsuccessful. Worthwhile projects are usually set at a large spatial scale and recovery may be relatively slow; so the challenge is to have sufficient resources to monitor key indicators, simply and inexpensively, in order to track the pathway of recovery. Further challenges include catchment-level ranking of disturbances for setting restoration priorities and catchment-level modelling of the interactive effects of restoration measures.

Further Reading:

- Hobbs, R.J. and Norton D.A. 1996. *Restoration Ecology* 4: 93-110.
 - Lake, P.S. 2001. *Ecological Management & Restoration* 2: 110-115.
 - Bond, N.R. and P.S. Lake 2003. *Ecological Management & Restoration* 4: 193-198.
 - Temperton, V.M., R.J. Hobbs, T. Nuttle and S. Halle 2004. *Assembly Rules and Restoration Ecology*. Island Press, Washington DC, USA.
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