

LANDSCAPE PERSPECTIVES ON WILDLIFE CONSERVATION IN WOODLANDS

Andrew F. Bennett and James Q. Radford

1. Scale is important! Complementary conservation actions are needed at different scales of management.
2. Ecological responses may not be directly proportional to the amount of environmental change: look for nonlinear and threshold responses
3. Incremental changes and cumulative impacts have profound consequences in woodland ecosystems
4. Networks of linear wooded vegetation (roadsides, streams) are critical components in modified landscapes
5. Woodland species show diverse functional responses to landscape change
6. Land-use history influences current landscape values and conservation issues

Introduction

Temperate woodland ecosystems in Victoria have been profoundly modified since the first European explorers and settlers traversed the State in the late 1830s. Indeed, Major Thomas Mitchell foresaw such change when, in 1836, he looked out from Mt Hope across the plains of northern Victoria:

As I stood, the first intruder on the sublime solitude of these verdant plains as yet untouched by flocks and herds, I felt conspicuous of being the harbinger of mighty change there; for my steps would soon be followed by the men and animals for which it seemed to have been made.

The ensuing changes to vegetation, soils, hydrology and native fauna (ECC 1997; Lunt and Bennett 2000) have been extraordinarily rapid on an ecological time scale – less than the lifespan of a living organism, as evidenced by the continued presence of trees of pre-European settlement origin.

Faunal response to landscape change in woodland ecosystems has been a central theme of some of our recent research. We have worked mainly in agricultural landscapes in north-central Victoria, with woodland birds as a particular focus of investigation (see map on next page).