

THE WHEATBELT WOODLANDS OF WESTERN AUSTRALIA: LESSONS FROM THE INVERTEBRATES

Jonathan D. Majer, Harry F. Recher and Anita Lyons

1. In terms of extent and magnitude of decline, biodiversity integrity is lower in the Western Australian wheatbelt than in any other botanical district of the State.
2. The trunks and canopies of trees are important sources of invertebrate biodiversity, with arboreal invertebrate richness exhibiting high species turnover over short distances and being higher in the wheatbelt woodland than in the higher rainfall forests to the west.
3. Isolated trees in paddocks and trees in corridors are important refuges of biodiversity.
4. Restoration through tree planting or seeding has maximum value for biodiversity if local species are used.
5. Oil Mallees planted in paddocks for economic reasons and salinity control have significant potential for enhancing the persistence of many native species in agricultural landscapes.

Introduction

The majority of our studies of woodland invertebrates have been conducted in the Wandoo (*Eucalyptus wandoo* and *E. capitata*) woodland region of Western Australia (see map on next page). This region, which is immediately to the east of the Jarrah/Marri (*E. marginata*/*Corymbia calophylla*) forest, gives way to lower mallee formations, before blending into the Great Western Woodlands, which lie beyond the agricultural clearing line to the east. Due to the adequate rainfall and suitability of the soil for agriculture, this Wandoo/Mallee area is known as the Western Australian wheatbelt, and over 90% of it has been cleared for agricultural production (Environmental Protection Authority 2007).