

## North East Victoria: Biodiversity

### *Ecosystems*

The biodiversity assessment is based on a study of forest ecosystems and communities (ecological vegetation classes or EVCs), flora and fauna species and their habitats and the potential threats to these in the region.

The North East region is one of great environmental diversity, with vegetation ranging from the drier Box Ironbark communities of the plains to tall ash forests and the alpine herbfields of the high country along the Great Dividing Range. The regional assessment identified 133 different environmental 'strata', or units sharing similar environmental factors such as temperature, rainfall and geology, 83 of which were forested and large enough to evaluate.

Across these strata, 58 EVCs were identified. Thirty-one are predominantly on private land, with the remaining 27 mainly on public land. Information is provided about the extent to which each EVC is currently protected within conservation reserves. Forty-six were recognised as rare, endangered or vulnerable. Some may never have been widespread, but for many their current status is connected with past land-use, particularly clearing for agriculture, and most occur largely on private land. Plains Grassy Woodland, for example, which once covered over 200 000 hectares in the region, has been reduced to less than one per cent of its former extent.

### *Rare and endangered species*

About 2,000 species of vascular (higher order) plants have been recorded for the North East region, including 166 species of conservation significance. At least 24 of these are rated as critically endangered including six which have a significant proportion of their remaining populations in the North East. In all, the assessment highlighted 15 species as deserving of regional priority for management.

The assessment identified 34 species of mammals, reptiles, birds and frogs in the North East which are rare or threatened. These include the Long-footed Potoroo, discovered in the North East in 1995, and the Spotted Tree Frog, which is known to occur in only 13 discrete populations: 11 in Victoria and two in New South Wales.

While the populations of many of the species studied have decreased in the past 10 years, some, including those of the Mountain Pygmy-possum, Barking Owl, Powerful Owl and Glossy Black-Cockatoo, are thought to have stabilised. The range of the Turquoise Parrot, which experienced a drastic decline during early European settlement, appears to be expanding.

The assessment also noted that, with some exceptions, little is known about the terrestrial invertebrates of the region.

The biodiversity assessment reviewed factors that may predispose flora and fauna species to decline or extinction, as well as the impacts of disturbances such as timber harvesting and fire, and the current management in place to mitigate these effects.

Of the aquatic fauna reviewed, eight species of fish (including the Barred Galaxias and the Trout Cod) and ten macroinvertebrates are considered threatened. The

main disturbances identified were vegetation clearing, construction of dams, grazing and introduced exotics, such as trout. Increased turbidity, from whatever cause, is the single most significant threat to populations. The creation of Heritage River corridors and the application of the Code of Forest Practices For Timber Production are aimed at reducing some of these impacts.

### **Old-growth Forest**

Analysis of forest age classes through the use of aerial photography, together with assessment of past disturbances using logging, fire and other historical records, was used to identify the old-growth forest of the North East. Old-growth is defined as 'forest which contains significant amounts of its oldest growth stage in the upper stratum - usually senescing trees - and has been subjected to any disturbance, the effect of which is now negligible'.

About 21 per cent (261,000 hectares) of the region's forested public land has been identified as old-growth. The assessment found that old-growth occurs in 14 EVCs in the region, with six accounting for 93 per cent of the total area. Old-growth is by no means confined to the taller wet forests, but can be found in a number of the drier, more open forest types. Information is provided about the extent to which old-growth in each EVC is currently protected within conservation reserves.

### **Wilderness**

The 1996 *Wilderness Assessment of the Eastern Victorian Forests* found five areas of high wilderness quality (Dartmouth, Indi Addition to Pilot and Davies Plain, Wabba, Yarrarabulla Creek and Razor/Viking) within the region, with three of them fully contained within the dedicated reserve system. The Dartmouth area is partially contained within the dedicated reserve system as is part of the Yarrarabulla Creek area with the remainder of the latter protected by an Order in Council as a Remote and Natural Area.

Ninety five per cent of the total area delineated as significant for high wilderness quality in the Eastern Victorian forests region is protected. The National Reserve criteria (JANIS 1997) specify that 90% (or more, if practicable) of the area of high quality wilderness that meets the minimum area requirements should be in reserves.

### **World Heritage**

The World Heritage Assessment expert panel identified five potential sub-themes in Victoria which warrant further investigation. Two of these sub-themes are potentially relevant to the North East region:

- areas with outstanding examples of *Eucalyptus*-dominated vegetation associated with the Eastern Forests of Victoria; and
- parts of the Australian marginal swells associated with the Eastern Highlands.

Any assessment of potential World Heritage values would need to be undertaken in a context broader than that of the North East RFA, as the expression of these sub-themes extends to other Victorian RFA regions and areas beyond Victoria. The Commonwealth and Victoria remain committed to carrying out such an assessment in co-operation with all relevant States.