

8. VEGETATION AND FAUNA

8.1 INTRODUCTION

The original native vegetation within the Little River Catchment varied according to geology, soil type, moisture and depth, temperature, rainfall, fire regime, aspect and location within the landscape. The current condition and integrity of this vegetation depends on the extent of clearing, grazing and disturbance that has resulted from landuse since European settlement.

Before European settlement, savannah woodlands covered most of the district, with tall woodlands and very limited forests found only in the higher rainfall extremities of the catchment to the south and east. The woodlands, which covered the low slopes, were cleared first for agricultural production. Steeper land was thinned to improve stock carrying capacity, and the herbaceous layer (grasses and forbs) has been further modified through pasture improvement since the 1950's. Now only a very small percentage of the catchment outside of Crown land remains under native vegetation and the majority of this is highly degraded.

The Catombal Ranges and the Goobang National Park (Hervey Ranges) are hosts to the only areas of relatively unaffected stands of woodland vegetation. Steeper land with shallow soils, found in the south west (also now part of the Goobang N.P.) and north west where Little River cuts through the Yeoval granites, also supports reasonable stands of timber. In the south west, white box and tumbledown gum (*E. albens* and *E. dealbata*) are found on the cooler hills, while white box and pine predominate in the north west.

The remaining remnant vegetation is highly fragmented and isolated. (See Figure 8.) These stands are generally found on poor soils, in areas with difficult access or along creek lines or road reserves. The land capability assessment suggests that far more land should have been left under native vegetation. (See Table 8 in Land Capability). Increased levels of vegetation would have reduced the risk of dryland salinity and erosion on the slopes. Along the creeks and rivers, the potential for streambank erosion and reduced water quality is high due to the removal of vegetation cover.

8.2 DESCRIPTION AND DISTRIBUTION OF VEGETATION

Temperate woodlands usually occur in areas of greater than 400-500 mm rainfall, however these may intrude into other areas. There are six communities in the Central West Catchment that can be defined as temperate woodlands: Yellow Box - Blakely's Red Gum (*E. melliodora* - *E. blakelyi*), White Box (*E. albens*), Narrow-leafed Red Ironbark (*E. crebra*), Blue-leafed Ironbark (*E. nubila*), Tumbledown Red Gum - Mugga Ironbark (*E. dealbata* - *E. sideroxylon*) and Red Stringybark - Inland Scribbly Gum (*E. macrorhyncha* - *E. rossii*).

Ironbark communities are found on dry slopes, flats and ridges, mostly on Devonian sedimentary substrates. A number of ironbark communities are conserved within the Goobang National Park. These include the Mugga Ironbark and the Red Ironbark. These are generally found with Black Cypress Pine and other Eucalypts and Acacias.

White Cypress Pine and Bulloak communities are found on low altitude flats with red sandy soils. There are a number of acacias and eucalypts associated with this community. However, this community may be at the eastern limits in New South Wales. These communities are also conserved in Goobang National Park.

Tumbledown Red Gum, Dwyer's Red Gum and the Inland Scribbly Gum are found in small, discrete areas, usually on ridges, slopes and cliffs. The structure of these communities depends on exposure, moisture availability and altitude.

The Yellow Box - Blakely's Red Gum communities are found on the better soils on the Tablelands. Good quality remnants are scarce due to clearing for cultivation and grazing. The White Box - Apple Box (*E. albens* - *E. bridgesiana*) associations are found along the southwest edge of the Wellington district and the northern part of the Cabonne shire. Blakely's Red Gum, Yellow Box, Grey Box and Red Ironbark are also found in this association.

The main species found on the open heathland are *Allocasuarina diminuta* subsp. *diminuta* and *Calytrix tetragona*. Associated species include Cypress Pine and a number of Eucalypts. Open heathland occurs only on the rocky areas in the Park and heathland commonly forms the understorey of many woodland communities.

8.2.1 Cumnock Subcatchment

The Cumnock subcatchment has very little remaining remnant vegetation. This land would previously have supported a *E. albens* - *E. bridgesiana* (white box- apple box) association (3). A small pocket of woodland vegetation exists in and around a State forest on the catchment boundary just north of Gumble, and in the north the steeper vegetated hills of the Catombal Ranges begin. The vegetation of the Catombals is distinctly different from the surrounding agricultural land, and is largely intact as a remnant. It is dominated by *Callitris* (black and white cypress), along with *E. dealbata* (tumbledown gum) and *Casuarinas* (drooping she-oaks). The shrub and herb layers still exist, which may provide a future seed source for the hilly areas within the district.

8.2.2 Yeoval Subcatchment

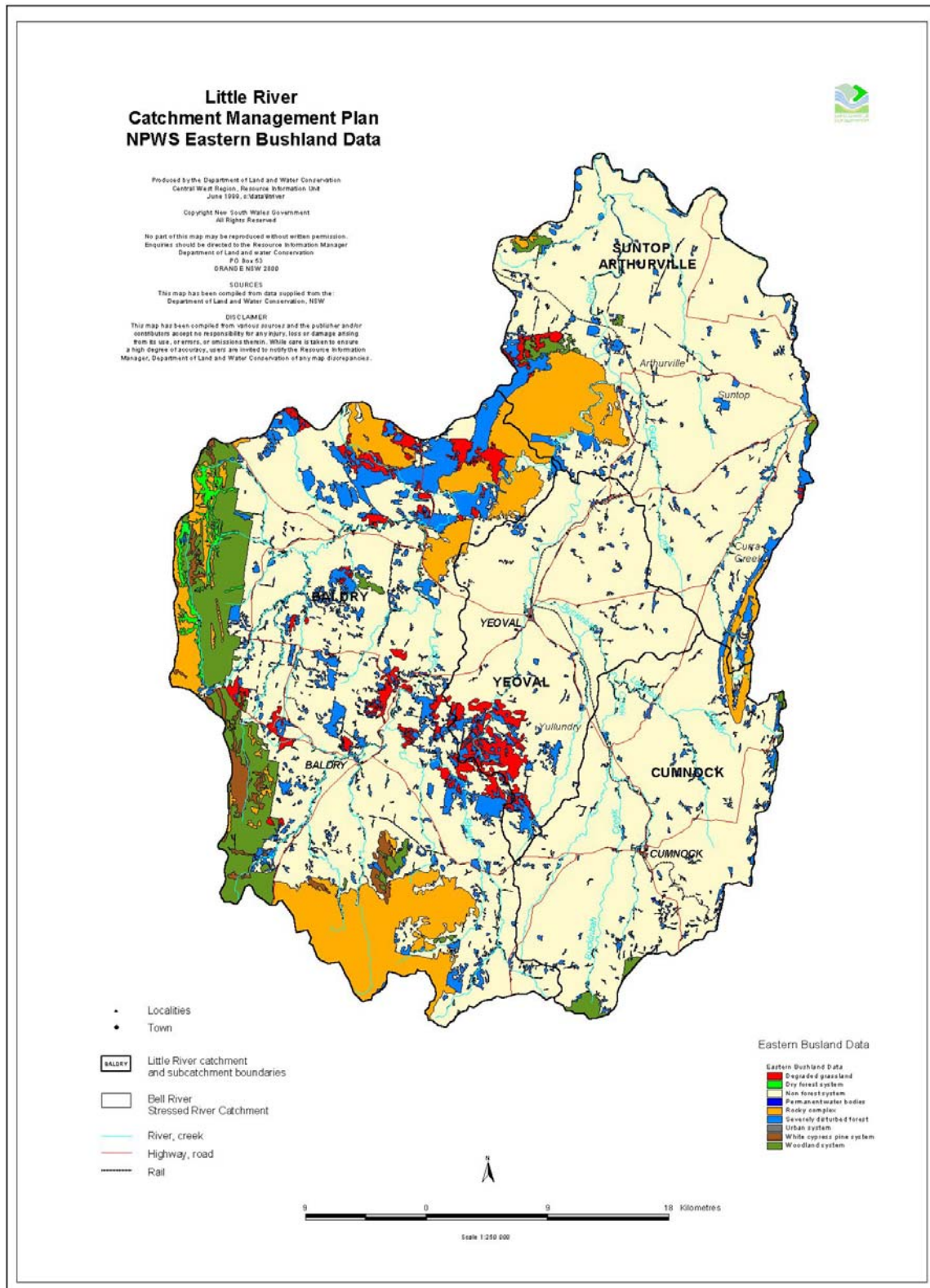
The Yeoval subcatchment is also largely devoid of large timber, with the only reasonably size remnants occurring on the infertile shallow soils of the highly dissected granites south of Yeoval. These are interspersed with areas of degraded grasslands, and these two complexes correlate with on Class V, VI and VII land. This district would originally have supported *E. microcarpa* - *E. albens* (grey box and white box) to the north and west of Yeoval, and *E. albens* - *E. bridgesiana* (white box- apple box) to the south-east.

8.2.3 Suntop / Arthurville Subcatchment

Suntop / Arthurville subcatchment is also extensively cleared, with the exception of the rough granitic country between Toongi and Arthurville, which is mostly in the Dubbo Shire. The eastern section of the catchment would previously have supported *E. microcarpa* - *E. albens* association. Grey box occurred on the lower slopes and white box in the upper slopes and ridges, with kurrajong and *E. conica* (fuzzy box) scattered throughout the landscape. *E. melliodora* (yellow box) occurs along the drainage lines, as it does virtually throughout the catchment.

On the flat alluvial land in the northern section of the catchment and along the Macquarie River stands of *E. camaldulensis* (river red gums) would have existed, sometimes in association with yellow box, rough barked apple and she-oaks.

Figure 8: Vegetation



8.2.4 Baldry Subcatchment

The Baldry subcatchment has the largest amount of vegetation remaining. There are a number of rocky complexes, woodlands, white cypress pine and dry forest systems associated with shallow soils and siliceous sands of the Hervey Ranges / Goobang National Park or the less accessible areas of the Yeoval Batholith. The Orange Technical Manual (24) suggests that the land with lower elevation would have supported a *E. albens* - *E. microcarpa* (white and grey box) association. The steeper land surrounding the catchment, including the Dulladerry Volcanics and Hervey Ranges, were covered by *E. albens* - *E. blakelyi* (white box and red gum).

8.2.5 Grasslands

There is limited information on the distribution and composition of grassland communities within the Central West Catchment. Grasslands in the Little River Catchment are mostly comprised of Plains Grass (*Stipa aristiglumis*), Curly Mitchell Grass (*Astrebula lappacea*) and Kangaroo Grass (*Themeda spp*). Plains Grass is generally found on dark grey, self-mulching clays on the Plains. Mitchell Grasslands occur in patches in the northern half of the Central West Catchment. Cultivation is also responsible for fragmenting native grass communities on the floodplains.

In the Cumnock area, Wallaby (*Austrodanthonia spp*), Wheatgrass (*Elymus scaber*), Red Grass (*Bothriochloa macra*), Spear Grass (*Austrostipa spp*) and Snow Grass (*Poa spp*) are common. Weeping Grass (*Microlaena spp*) is less common (pers. comm. M. Whitehorn). Grasslands have been altered due to fire regimes, grazing and soil types.

8.3 THREATENED SPECIES

The conservation and protection of Australian native species is achieved through both State owned reserved areas such as National Parks and Nature Reserves and also through “off-park” conservation where the farmers are encouraged to manage for multi-purpose objectives of production and conservation. The latter is supported through National Parks and Wildlife Service (NPWS) zone specialists providing advice and support, and through voluntary conservation agreements.

Native animals are vital in maintaining a healthy functioning ecosystem, and provide positive benefits to agriculture as well as preserving our heritage. For example, birds reduce insect pests in trees, crops and pastures, while reptiles maintain the balance in bird populations through predation of their eggs.

This area was once woodland with grass and shrub understorey, and supported populations of reptiles, mammals and birds. Clearing of large tracts of native vegetation, both trees and grasses, and the introduction of animals from overseas are just two of many threatening processes that are dramatically reducing the numbers of native fauna; in some cases to the brink of extinction. Recent research has shown that numbers of woodland birds are declining rapidly, and a number of species are threatened.

There are forty-five species of threatened or endangered fauna, including mammals, reptiles and birds, which are likely to occur in the area covered by the Wellington 1:100 000 topographic map sheet, and five species of plants. These fauna and flora species, and their habitat, food sources and threatening processes are listed provided in Appendix 5.

8.3.1 Goobang National Park

The National Park was proclaimed in 1996, prior to which time it was mostly State Forest and some small Nature Reserves. Almost half the park lies within the Little River catchment, the remainder to the west. The forest has not been logged since the early 1980s, but areas of old growth forest remain as examples of the vegetation prior to European settlement.

Within the Goobang National Park, there are eleven distinct vegetation communities. These are dominated by open woodland, although they range from open forest to heathlands. There is considerable species diversity with low proportions of exotic species.

There are nine significant species recorded in the Goobang National Park that are rare or threatened. Five of these species are listed as Rare or Threatened Australian Plants (ROTAPs) and four of the species have restricted distribution areas or are regionally significant.

References:

- (3) Soil Conservation Service (1982) *Wellington District Technical Manual Ch. 6*
- (5) Cabonne Council (1996) *State of the Environment Report 1995-1996*
- (6) Howling, G.M. (1997) *Remnant Vegetation Strategy for the Central West Catchment p4*
- (24) Soil Conservation Service (1978) *Orange District Technical Manual Ch 6*
- (30) Porteners, M.F. (1997) *Vegetation Survey of Goobang National Park*
- (48) DLWC Data and Maps – M305 vegetation survey, NPWS Eastern Bushlands Data