



### **White Box Yellow Box Blakely's Red Gum Woodland - Profile**

**Scientific name:** White Box Yellow Box Blakely's Red Gum Woodland

**Conservation status in NSW:** Endangered Ecological Community

**Commonwealth status:** Critically Endangered

#### **Description:**

White Box Yellow Box Blakely's Red Gum Woodland (commonly referred to as Box-Gum Woodland) is an open woodland community (sometimes occurring as a forest formation), in which the most obvious species are one or more of the following: White Box *Eucalyptus albens*, Yellow Box *E. melliodora* and Blakely's Red Gum *E. blakelyi*. Intact sites contain a high diversity of plant species, including the main tree species, additional tree species, some shrub species, several climbing plant species, many grasses and a very high diversity of herbs. The community also includes a range of mammal, bird, reptile, frog and invertebrate fauna species. Intact stands that contain diverse upper and mid-storeys and groundlayers are rare. Modified sites include the following:

- Areas where the main tree species are present ranging from an open woodland formation to a forest structure, and the groundlayer is predominantly composed of exotic species; and
- Sites where the trees have been removed and only the grassy groundlayer and some herbs remain.
- The Australian Government listing of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is slightly different to the NSW listing. Areas that are part of the Australian Government listed ecological community must have either:
- An intact tree layer and predominately native ground layer; or
- An intact native ground layer with a high diversity of native plant species but no remaining tree layer.

#### **Distribution**

Box-Gum Woodland is found from the Queensland border in the north, to the Victorian border in the south. It occurs in the tablelands and western slopes of NSW.

#### **Habitat and ecology:**

- Characterised by the presence or prior occurrence of White Box, Yellow Box and/or Blakely's Red Gum.
- The trees may occur as pure stands, mixtures of the three species or in mixtures with other trees, including wattles.
- Commonly co-occurring eucalypts include Apple Box (*E. bridgesiana*), Red Box (*E. polyanthemos*), Candlebark (*E. rubida*), Snow Gum (*E. pauciflora*), Argyle Apple (*E. cinerea*), Brittle Gum (*E. mannifera*), Red Stringybark (*E. macrorhyncha*), Grey Box (*E. microcarpa*), Cabbage Gum (*E. amplifolia*) and others.
- The understorey in intact sites is characterised by native grasses and a high diversity of herbs; the most commonly encountered include Kangaroo Grass (*Themeda australis*), Poa Tussock (*Poa sieberiana*), wallaby grasses (*Austrodanthonia* spp.), spear-grasses (*Austrostipa* spp.), Common Everlasting (*Chrysocephalum apiculatum*), Scrambled Eggs



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(*Goodenia pinnatifida*), Small St John's Wort (*Hypericum gramineum*), Narrow-leafed New Holland Daisy (*Vittadinia muelleri*) and blue-bells (*Wahlenbergia* spp.).

- Shrubs are generally sparse or absent, though they may be locally common.
- Remnants generally occur on fertile lower parts of the landscape where resources such as water and nutrients are abundant.
- Sites with particular characteristics, including varying age classes in the trees, patches of regrowth, old trees with hollows and fallen timber on the ground are very important as wildlife habitat.
- Sites in the lowest parts of the landscape often support very large trees which have leafy crowns and reliable nectar flows - sites important for insectivorous and nectar feeding birds.
- Sites that retain only a grassy groundlayer and with few or no trees remaining are important for rehabilitation, and to rebuild connections between sites of better quality.
- Remnants support many species of threatened fauna and flora.
- Retention of remnants is important as they contribute to productive farming systems (stock shelter, seed sources, sustainable grazing and water-table and salinity control).
- The fauna of remnants (insectivorous birds, bats, etc) can contribute to insect control on grazing properties.
- Some of the component species (e.g. wattles, she-oaks, native legumes) fix nitrogen that is made available to other species in the community, while fallen timber and leaves recycle their nutrients.
- Disturbed remnants are considered to form part of the community, including where the vegetation would respond to assisted natural regeneration.

### **Threats:**

- Clearing, degradation and fragmentation of remnants for agricultural, forestry, infrastructure and residential development.
- Continuous heavy grazing and trampling of remnants by grazing stock, resulting in losses of plant species (simplification of the understorey and groundlayer and suppression of overstorey), erosion and other soil changes (including increased nutrient status).
- Invasion of remnants by non-native plant species, including noxious weeds, pasture species and environmental weeds, including garden escapes, olives and pines.
- Invasion of remnants by feral animals resulting in the loss or modification of habitat.
- Disturbance and clearance of remnants during road, rail and infrastructure maintenance and upgrades.
- Harvesting of firewood (either living or standing dead, including material on the ground).
- Collection of on-ground woody debris in the guise of a 'clean-up'.

### **Activities to assist this species:**

- Undertake control of rabbits, hares, foxes, pigs and goats (using methods that do not disturb the native plants and animals of the remnant).
- Manage stock to reduce grazing pressure in high quality remnants (i.e. those with high flora diversity or fauna habitat).
- Do not harvest firewood from remnants (this includes living or standing dead trees and fallen material).
- Leave fallen timber on the ground.
- Erect on-site markers to alert maintenance staff to the presence of a high quality remnant or population of a threatened species.
- Encourage regeneration by fencing remnants, controlling stock grazing and undertaking supplementary planting, if necessary.
- Undertake weed control (taking care to spray or dig out only target species).



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- Protect all sites from further clearing and disturbance.
- Ensure remnants remain connected or linked to each other; in cases where remnants have lost connective links, re-establish them by revegetating sites to act as stepping stones for fauna, and flora (pollen and seed dispersal).
- Mark remnants onto maps (of the farm, shire, region, etc) and use to plan activities (e.g. remnant protection, rehabilitation or road, rail and infrastructure maintenance work).
- On-site markers can alert maintenance staff to the presence of a threatened species.

### **Information sources:**

*Beadle, N.C.W. (1981) The Vegetation of Australia. (Cambridge University Press, Cambridge)*

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*Eddy, D., Mallinson, D., Rehwinkel, R and Sharp. S. (1998) Grassland Flora: a field guide for the Southern Tablelands (NSW & ACT). (Environment ACT, NSW National Parks and Wildlife Service, World Wide Fund for Nature Australia, Australian National Botanic Gardens, Natural Heritage Trust, Canberra)*

*Fallding, M. (2002) A Planning Framework for Natural Ecosystems of the ACT and NSW Southern Tablelands. Natural Heritage Trust, NSW National Parks and Wildlife Service, and Land & Environment Planning. Queanbeyan, NSW.*

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