

4. Vegetation communities of Kinglake National Park

Aim

To familiarise students with the main types of vegetation communities found at Kinglake National Park.

Materials

- Resource sheet 4: Vegetation of Kinglake National Park.
- Contour map of Kinglake National Park and surrounds.
- Map of Kinglake National Park from activity 3.
- *Native trees and shrubs of south-eastern Australia*. Leon Costermans. 1981.

Activities

1. Read resource sheet 4:Vegetation of Kinglake National Park.
2. Using your previous map of Kinglake National Park (activity 3) showing which areas are plateau, slopes and gullies, suggest which vegetation type you would expect to find around the following locations.

Site within Kinglake National Park	Likely vegetation community
The park's Visitor Centre	
Masons Falls picnic area	
Jehosaphat Gully picnic area	
Island Creek picnic area	
The Gums camping ground	
Andrew Hill	
Frank Thomson Reserve	
Other site (add name)	

3. Describe the relationship between topography, aspect and vegetation communities in Kinglake National Park.

4. Suggest why sclerophyllous plants are likely to be found on the plateau and slopes of Kinglake National Park, and not in the gullies.

5. Suggest what other factors may have determined the particular type of vegetation occurring in any part of the park.

At the park

The 1.8 km walk along the Shelley Harris track from the Jehosaphat Gully car park to the Mt Jerusalem track takes you through a good selection of all three of these vegetation types.

N.B. This is not a circuit walk, and requires return along the same route.

Feel and describe the leaves of understorey plants in each of the three main vegetation communities found in the park.



Kangaroo Grass © MT

4. Vegetation of Kinglake National Park

Kinglake National Park has three main types of vegetation, although there are many variations of these main vegetation communities.

The plateau supports tall, wet eucalypt forests. The eroded ridges support dry eucalypt woodland. Between the ridges in the deep gullies are found lush ferns and mosses along with a host of wet gully plants. Aspect, soil types and climatic variations determine these different vegetation types in the park.

Plateau country

The open forest on the plateau country is dominated by Narrow-leaved Peppermint and Messmate Stringybark. It has an open understorey of mostly sclerophyllous (see below) shrubs such as Common Heath, Hop Goodenia and many different types of native peas. Hazel Pomaderris, Wonga Vine and Forest Clematis occur in some wet gullies.

A variation of this major vegetation type occurs in the moister sites where Mountain Grey Gum is often co-dominant with Messmate Stringybark and ferns become more dominant in the understorey. Mountain Grey Gum can be seen at Jehosophat Gully Picnic Area on the plateau country above the gully.

Gullies

In the gullies, Mountain Grey Gum and Manna Gum are the main trees, but in some sheltered sites in the east, pockets of Mountain Ash are found. The understorey typically includes Blackwood, Silver Wattle, Hazel Pomaderris, Blanket-leaf, Musk Daisy-bush, with a dense understorey of treeferns - Soft Treefern is found in the base of the gully while Rough Treefern occurs a little higher up.

In some gullies where drainage is impeded, Swamp Gums form an open forest. The understorey here is often dense. A small pocket of this vegetation type occurs on the other side of the road from Island Creek Picnic Area.

Drier slopes

A mix of Broad-leaved Peppermint, Narrow-leaved Peppermint, Red Stringybark and Long-leaved Box form open forests on the drier northern and western slopes of the park. The understorey is made up of Austral Grass-tree, Hairpin Banksia and many smaller hard-leaved shrubs. Many of these plants belong to the pea (Fabaceae), myrtle (Myrtaceae), heath (Epacridaceae) or Proteaceae families, and contribute to a colourful spring display. Orchids are also quite common in this type of vegetation.

The term **sclerophyllous** describes vegetation with hard, dry leaves. Sclerophyllous leaves are an adaptation to low supplies of water and nutrients, i.e. poor soils. By comparison, the leaves of plants growing in the wet gullies in the park are much softer.

The park supports a number of rare and significant plant species and communities which require special protection.

The vegetation types conserved in Kinglake National Park are typical of those that once occurred over much of the foothills and southern slopes of the Great Divide in Central Victoria. These vegetation communities are important to conserve because their distribution has been greatly reduced over the last 150 years.

The conservation value of the park is further increased by its rare species, and those which have interesting distributions.

Swamp Bush-pea is an endangered species found in the park. Gunn's Tree Orchid is a rare epiphytic species which is threatened through destruction of habitat by bushfire. Netted Brake is relatively uncommon in other areas of Victoria. Other uncommon plants include Mountain Gentian, Cliff Cudweed, Creeping Grevillea and Lacy Pomaderris.

Spring wildflowers are prolific throughout the park during the months of October and November.

There are 599 plant species recorded for Kinglake National Park, of which 77 are introduced species. The park supports 21 Victorian rare or threatened flora species, of which seven are also rare or threatened within Australia.

Nine of the main Ecological Vegetation Types occurring in the park are:

- Cool Temperate Rainforest.
- Wet Forest.
- Damp Forest.
- Shrubby Foothill Forest.
- Lowland Forest.
- Herb-rich Foothill Forest.
- Heathy Dry Forest.
- Grassy Dry Forest.
- Gully Woodland.

Vegetation unit	Canopy - Uppermost layer	Understorey
Drier Northern and Western Slopes Open Forest	Broad-leaved Peppermint Narrow-leaved Peppermint Red Stringybark Long-leaved Box	Austral Grass-tree Hairpin Banksia Plants with hard, dry leaves – pea, myrtle heath or protea families
Plateau Country Open Forest	Narrow-leaved Peppermint Messmate	Wonga Vine Forest Clematis Hazel Pomaderris Common Heath Many species of native peas
Open Forest – regrowth	Mainly Messmate to 20 metres tall	Wonga Vine Forest Clematis Hazel Pomaderris Common Heath Many species of native peas
Wet Gullies in sheltered southern valleys	Mountain Grey Gum Manna Gum Some Mountain Ash occur in sheltered sites in the East.	Blackwood Silver Wattle Hazel Pomaderris Austral Mulberry Blanket Leaf Musk daisy bush Soft tree fern Rough tree fern
Tall Open Forest	Mountain Grey Gum Messmate Some Mountain Ash	Ferns more dominant