5. Vegetation associations

Discussion topics and information

A vegetation association is a group of plants which occurs in association with soil types, rainfall and other climatic conditions along with animals, birds and insects. The plants in these areas are there because they are best at exploiting the conditions available to them. A vegetation association is usually named after the most dominant canopy species occurring in the area, which is most often the Eucalypts, eg Grey box grassy woodland or Stringybark forest. The terms *woodland* and *forest* refer to the organisational structure of the vegetation, sometimes called the vegetation class. A forest consists of taller trees generally more than 15 metres high which are quite close together, a woodland has fewer large trees and more medium size tree to 5 metres which are a lot further apart, giving a more light and open appearance. Woodlands are often grassy at ground layer.

Vegetation communities can in many instances be correlated with soil types and topography. Over thousands of years the plants and animals living in these associations have started to become dependant on one another for food, pollination, pest control, water supply and habitat provision. There are certain animals which show distinct preferences for particular vegetation associations and individual plants. On the other hand there are a number of species for which a variety of habitats and vegetation associations are essential to their survival. Therefore it is important for us to give consideration for all types of vegetation associations, when we think about conservation and restoration. Variety is important!

We can often easily work out what the vegetation in an area was like, based on what still grows in our national parks and reserves. Sometimes entire regions have been extensively cleared, leaving little of the original vegetation, making it a lot harder to determine what was once there. In this case we can often work it out from tiny patches of vegetation left on roadsides or single trees left in parks or residential gardens. Combining this information with soils and rainfall data will usually enable us to predict what the vegetation once looked like.

Why is this information important?

Many of the serious environmental issues facing us today eg dryland salinity, loss of biodiversity, loss of water quality, can be attributed to the clearance of indigenous vegetation from the landscape. In order to address these issues, revegetation is the management tool most often implemented. To ensure that our revegetation projects are successful, we need to be aiming to reinstate the plants which once occurred in that area as they are best suited to the local conditions and provide the best habitat for local indigenous species. Learning about what used to be there (and what shouldn't be there) allows us to make informed decisions when managing these areas.

As is always the case in nature, nothing is ever black and white. The concept of a vegetation association is based on human observations and used to help us to understand why plants occur in groups and why vegetation changes across the landscape. There will always be plants which break the rules and grow in areas which are seemingly completely unsuitable for their well-being. Lines on a map showing the boundaries between vegetation associations will more often than not represent a very broad, fuzzy line in nature and should not be interpreted as absolute.

Lesson ideas

About the vegetation associations map

At the back of this folder is a map of the pre-European vegetation associations of the Onkaparinga catchment board area (OCWMB). The dominant canopy species are listed at the beginning of each information box. Where a +/- appears, the species appearing after this symbol occurs inconsistently across the range.

As vegetation associations are most often determined by soil type and rainfall, this information is also included for each area. The vegetation class and a description of the typical landscape is also indicated. The vegetation around a creek or river (the riparian zone) is often a little different, so the typical canopy species for these zones is also indicated. Further information about other plants occurring within association can be found on the plant identification charts at the back of this folder.

- Show students the map of the pre-European vegetation association and ask them to work out where they live and go to school. As this map has little in the way of cadastral information, it may be useful to cross-reference with the Onkaparinga catchment map (folder 1).
- Ask students what the pre-European vegetation community is/was where they live and where they are at school. The correct way of writing this is *Grey box and SA blue gum woodland* or *Rough-barked manna gum +/- River red gum*, depending on the region. Where more than one vegetation association is possible, ask students to write down all possibilities. As their plant knowledge improves they may be able to work out which one they are actually in by looking at the plants in their street. This can be as simple as determining whether these plants have brown stringy bark or white, smooth bark. Encourage students to also become familiar with Latin names of plants.
- Ask students to write down what the soil type is in their area and the rainfall range. Ask them to research what the specific annual average rainfall is for their closest town.
- Ask students to research and write about five other plant species which occur in their local vegetation association and the types of animals which may use those plants.
- Ask them to write down why they think vegetation associations change across the landscape and why they there is so much variety in the Onkaparinga catchment area. Do they know what the dominant canopy species of their area looks like, eg, the Eucalypts? Do they know where there are any patches of bush in their local area?
- Encourage students to take note of changes in vegetation as they travel around in their personal lives.
- Contact the Catchment Board to obtain an aerial photograph of the school and surrounding area to show any areas of remnant bushland nearby.

Recommended resources

Woodlands and Shrublands of the Southern Adelaide Region in 1836

and/or

Woodlands and Shrublands of the Adelaide Metropolitan Region in 1836

These two posters show the vegetation association which once occurred across the Adelaide area. Unfortunately the range of these posters does not extend into the Adelaide Hills. These posters are available for approximately $3 each from the Urban Forests and Biodiversity Program, Ph: 8278 0600