

# BEHIND THE SCENES

An Education Program suitable for VCE & TAFE

## Program Snapshot

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This program is suitable for Tertiary students doing studies in, Horticulture and Land Management. It is also appropriate for VCE students studying Biology Unit 1 – Unity & Diversity. This program supports the VELS where at Level 5, Science Knowledge and Understanding, students explain how the observed characteristics of living things are used to establish a classification system. And at Level 6, Science at work, where students are able to provide examples of the work of scientists that demonstrates different approaches to developing scientific knowledge or solving a scientific problem. *Please visit our website for more details.*

The National Herbarium of Victoria is one of Australia's oldest scientific institutions and houses internationally significant collections of preserved plant, algal and fungal specimens.

This program takes students behind the scenes into the National Herbarium of Victoria and the Gardens' Nursery Collections. In this 1.45min session, Royal Botanic Gardens staff introduce students to techniques in collecting, pressing, mounting and identifying plant specimens. Students will also discover some fascinating botanical specimens and their stories.

### Focus Topics

- The importance of herbaria and botanic gardens in conserving biodiversity
- Collection and mounting of plant specimens
- Plant identification and classification focussing on plant families
- Maintenance of living plant collections in a nursery

### Experiences

- Students visit behind the scenes in the National Herbarium of Victoria where they will be introduced to the function and operations of a herbarium. They will see what happens to a plant specimen from its collection through to its mounting and storage.
- In the 'Volunteers Room' students see how specimens are mounted including all the tools, materials and protocols. They also have a close look at a variety of old and new specimens that illustrate different methods of plant collection and preservation over many decades. Students also meet a few special curiosities with some fascinating stories.

- In the Identifications Room, students learn of techniques and resources RBG IDs staff have to determine the species of plants. They also find out about the tools that are used in collecting and pressing in the field. Students discover the work of the Royal Botanic Gardens in taxonomy and plant conservation.
- In the nursery students meet one of the RBG nursery staff who guides students through the special features of such a facility in a botanic garden. This includes the propagation and research functions as well as the housing of special plant collections that are not normally visible to the general public.

## Significant Plants and Places

**The National Herbarium of Victoria** houses roughly 1,200,000 pressed plant specimens. It contains representatives of most of Australia's flowering plants, especially those present in Victoria. As well as thousands of specimens representing the major plant groups from other countries.

The first herbarium building was situated on the Domain towards the Shrine of Remembrance. It was built in 1861 after Dr. Ferdinand Mueller, the first director of the Gardens, repeatedly petitioned the government for space to house his collection of 45,000 specimens. The new building had room for 160,000 specimens, and this was filled in the first year. It was in use until 1934 when it was demolished to build the Shrine. The collection was transferred into the present herbarium completed in 1934 as a gift to the state from Sir Macpherson Robertson to mark the Centenary of Melbourne.

**Punk** (*Piptoporus portentosus*), A large shelf fungus that grows on living or dead Eucalyptus trees. There are a few records from Tasmania of the fungus being used as a food source. Commonly used as a tinder in fire making and for carrying fire around. When the fungus is alight it will smoulder very slowly. It may have been used for transporting fire from one campsite to another.

***Cordyceps gunii***. When this organism was discovered last century it created a lot of excitement. It was believed to be the first living organism that was half plant and half animal. The bottom half of the organism is a grub that lives in the soil. The top forked half is the fruiting body of the fungi, *Cordyceps gunii*. Investigation of the specimen in its natural environment discovered that rather than living in domestic harmony the fungi was a ferocious parasite. The grub lives underneath the ground feeding on vegetable material. During this part of the grub's life cycle the fungi sends their hyphae through spiracles into the living body of the host and keep growing until the whole internal organs of the host are consumed, thus killing it. The stroma (fruiting body) of the fungi emerges from the upper part of the host nearest the surface. The stromata must push their way through the soil to get their fertile parts to the surface. The length of the stalk is dependent on the size of the host and its depth underground is 30cm on average.

### Session Times:

Morning sessions 10.15am –12.00noon

Afternoon sessions 12.30pm –2.15pm

Please speak with our Booking Officer if these times are not suitable

### Contact

The Education Booking Officer  
on 03 9252 2358

Email: [edserv@rbg.vic.gov.au](mailto:edserv@rbg.vic.gov.au)

Or visit our website at  
[www.rbg.vic.gov.au/education](http://www.rbg.vic.gov.au/education)