

The Ethnobotany Garden: A Tapestry of Past and Present

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Map of the Ethnobotany Garden

The Botanic Gardens' newest feature, the Ethnobotany Garden, was officially opened on 30 June 2018 by Mr Desmond Lee, Singapore's Minister for Social and Family Development & Second Minister for National Development. It comprises a Centre for Ethnobotany and an outdoor garden showcasing over 300 species of plants used traditionally by the indigenous people of the region. The aim of the Ethnobotany Garden is to be a hub for research in ethnobotany and to provide educational opportunities for visitors.

The outdoor garden is organised into four zones to reflect the traditional uses of plants by indigenous people in the region – the Living Zone which highlights plants used for sustenance, the Craft and Construction Zone, the Symbolism Zone focusing on the symbolic uses of plants, and the Medicinal Zone. The plant palette is mainly inspired by the tribal traditions of Indochina and

based on notes from I. H. Burkill's Dictionary of the Economic Products of the Malay Peninsula. The outdoor landscape and shelters are decorated with artefacts sourced from Borneo. Boulders with murals depicting various scenes of domestic life are also displayed in each zone.

Living Zone

The earliest tribes in the region were hunter-gatherers who foraged for sustenance and developed weapons for hunting from resources found in their forest environment. Framing the main entrance to the Ethnobotany Garden from the Eco-Lake is *Antiaris toxicaria*, a species important to many hunters from Peninsular Malaysia and Borneo, as the latex is traditionally used as arrow poison. Also at the main entrance are species such as *Baccaurea parviflora*, *Durio oxleyanus* and *Diplazium esculentum* which provide some of the fruits and vegetables traditionally foraged from the

1. A bird's-eye view of the Ethnobotany Garden, with the Centre for Ethnobotany shown at the top centre. Photo credit: Wong Tuan Wah

2. The Ethnobotany Garden is located in the Bukit Timah Core south of the Eco-Lake. It was designed around a waterbody and is organised into four zones which reflect the traditional use of plants in medicine, in craft and construction, for symbolic purposes and for food.



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The outdoor landscape and shelters in the Ethnobotany Garden are decorated with artefacts sourced from Borneo.

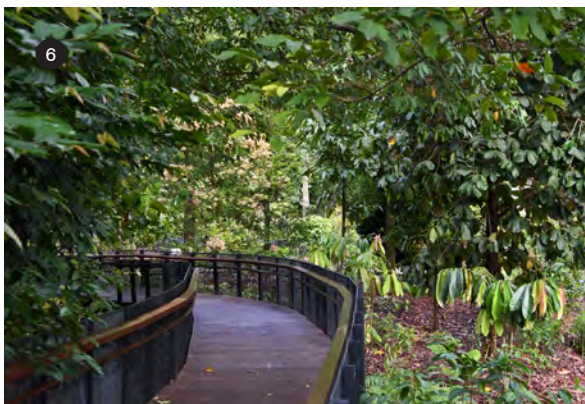


3. The Living Zone features a collection of plants with edible rhizomes and tubers, such as *Tacca leontopetaloides*.

4. Stingless bee hives and *Koompassia excelsa* trees in the Living Zone.

5. A stone mural by Mr Yip Yew Chong in the Living Zone depicting a scene in a Peranakan kitchen. There are three other murals featured in the Ethnobotany Garden; they show scenes of a Hindu wedding (in the Symbolism Zone), a kampong (in the Craft and Construction Zone) and a medicinal stall (in the Medicinal Zone). Photo credit: Angelia Sia





6. A boardwalk lined with forest species takes visitors through the Medicinal Zone.
7. (Left to right) *Phyllagathis rotundifolia*, *Labisia pumila* and *Tacca integrifolia* are some of the medicinal plants featured in the Medicinal Zone.

wild. Plants with edible rhizomes or tubers, like *Tacca leontopetaloides* and *Dioscorea hispida*, are also showcased.

Traditionally, the Dayak from Borneo would make the treacherous climb up *Koompassia excelsa* trees to harvest honey from honeybees nesting in the canopy. This tradition has evolved over time and today many Dayak prefer to collect honey from artificial hives located near the ground instead. Boxes for stingless bees have been installed at the base of a collection of *Koompassia excelsa* trees in the Living Zone. These boxes contain live colonies of the harmless stingless bee *Heterotrigona itama*, allowing visitors to safely observe bee activity up-close. This feature offers school groups and people of all ages an opportunity to learn about and appreciate the importance of bees and pollination.

Craft and Construction Zone

The plant collection in this zone consists of species which are used for timber, fibre and dye. One of the chief timber species that can be found here is *Eusideroxylon zwageri*. Commonly called Belian, it is used by the Dayak for crafting blowpipes, spears and religious totems. Various rattan and bamboo species commonly used in basketry are also on display in this zone. Also found here is *Artocarpus*

odoratissimus, the bark of which is traditionally used to make cloth, or terap. This was the material of choice for clothing by many indigenous people before the introduction of cotton. Visitors can also see a variety of plants used as sources of traditional dyes in this zone.

Symbolism Zone

Plants of cultural significance are showcased in this zone. There is a boardwalk through this area that takes visitors around an old *Cassia fistula* tree, which is enclosed by the roots of a Banyan tree (*Ficus microcarpa*). Along the boardwalk, species that produce an aromatic resin such as *Dryobalanops aromatica* and *Aquilaria malaccensis* can also be seen. Burning of their resins or bark is said to confer protection and heighten spiritual awareness in some religious ceremonies.

Medicinal Zone

Many modern medicines are derived from plants, discovered through indigenous knowledge passed down for generations. In the Medicinal Zone, an elevated boardwalk takes visitors through a collection of forest plants with medicinal value, including orchids such as *Corymborkis veratrifolia* and *Bromheadia finlaysonianana*.



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The ‘Cornucopia of the Botanical World’ gallery in the Centre for Ethnobotany displays artefacts collected from Peninsular Malaysia and Borneo.



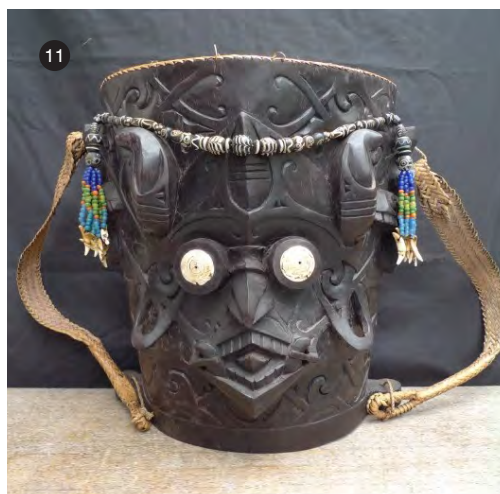
8. View of the Centre for Ethnobotany from the outdoor garden.

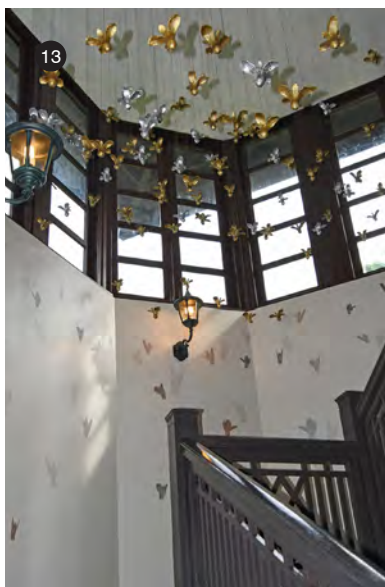
9. Visitors can learn about the seven key species that shaped the region’s history in this interactive showcase.

10. The artefacts in the ‘Cornucopia of the Botanical World’ are of plant origin and were sourced mainly from Sarawak. Photo Credit: Angelia Sia

11. This traditional Dayak baby carrier was carved from Belian (*Eusideroxylon zwageri*) and weighs more than 3 kg.

12. This interactive feature allows visitors to view selected pages of Burkill’s Dictionary of the Economic Products of the Malay Peninsula.





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As forests and indigenous communities around the region disappear, the Ethnobotany Garden aims to collect and preserve traditional knowledge of plants.

Centre for Ethnobotany


The Centre for Ethnobotany is part of a cluster of five conserved houses which used to serve as staff housing for the principal and professors of Raffles College, the predecessor of NUS. Built around 1928, it overlooks the outdoor garden, and can be reached from the Medicinal Zone on an old brick staircase which is part of the original house, or from the building's main entrance near the Summit canteen at NUS.

The first floor of the Centre for Ethnobotany explores the relationship of plants and people. It features a room with the theme 'Plants Shaping the World and Beyond', showcasing economic plants and their significance in shaping global history. An interactive rotoscope allows visitors to view the cross sections of plant parts, overlaid by a movable screen with an illustrated animation of how the plants are processed for use. Noteworthy species highlighted here are Gutta Percha (*Palaquium gutta*), Nutmeg (*Myristica fragrans*), Cacao (*Theobroma cacao*) and Pará Rubber (*Hevea brasiliensis*), the latter being of particular significance to the history of the Singapore Botanic Gardens.

Also on the first floor is 'Cornucopia of the Botanical World', a gallery displaying artefacts collected from Peninsular Malaysia and Borneo. These are objects made from plants and previously used by indigenous people for domestic purposes, such as baskets, baby carriers, musical instruments and ceremonial totems. Through these artefacts, visitors can discover how indigenous knowledge of plants and botanical resources has shaped culture and identity.

Underneath the staircase leading up to the second level is a cosy corner resembling a miniature library, complete with a desk where visitors can explore a digitised version of Burkill's Dictionary. Published in 1935, this book is a treasure trove of rare accounts of indigenous knowledge on plants. These were documented by I.H. Burkill based on field observations during his time as the Director of the Singapore Botanic Gardens from 1912 to 1925.

Known as the 'Shorea deck', the second level of the Centre for Ethnobotany is a flexible multipurpose space which allows for changing exhibitions and workshops to be held. A collection of 175 wooden printing blocks bearing botanical illustrations are currently on display in one room of this space. A number of these illustrations were created by Juraimi bin Samsuri, a Malayan artist employed by the Gardens in the 1940s, including when Singapore was under Japanese rule during WWII. During this period, Japanese botanists catalogued local uses of plants for a publication called Illustrations of Useful Plants of the Southern Region which was published by the Malaya Military Department. Their work highlights the unusual collaboration between the Japanese occupiers and Gardens staff during the war.

As forests and indigenous communities around the region disappear, the Ethnobotany Garden aims to collect and preserve traditional knowledge of plants, and provides an avenue to raise awareness about the field of ethnobotany. 

13. *Shorea macrophylla* fruits made from brass hang from the ceiling over the staircase to the second level.

14. An exhibition of Japanese woodblocks is currently on display on the second level of the Centre for Ethnobotany.