

Asia – a rich diversity of landscapes

Eastern, Central & Western Asia and The Himalayas

Extending over a wide range of climates, Asia and the Himalayas contain a rich flora that has coexisted with human habitation for thousands of years. This has meant that the plants only appear in their natural habitat in unproductive or mountainous areas. In more intensively inhabited areas some plants may have become extinct prior to the advent of modern botany.

Explorers and Collectors

Asia and the Himalayas have been an important source of garden plants for Europe and North America since the mid-nineteenth century. Entry to China was restricted prior to the Opium Wars [1839-1842] and to Japan prior to 1853. Plant collectors also faced difficulties such as slow transport, local wars and banditry.

Enterprising early explorers and missionaries sent plants on long sea voyages back to Europe, where valuable rewards could be expected. Later, plant hunters were sent by nurseries and wealthy individuals in search of new plants for gardens. Now local botanists explore the flora to assist in its conservation, for genetic material, medicinal and industrial use, and for new varieties better suited to specific climates.

Some early European plant hunters are commemorated by plant names. One was Dr Nathaniel Wallich [1786-1854], who worked in the Calcutta Botanical Gardens. He was the first person to successfully introduce Himalayan plants to Europe. The Bhutan pine [*Pinus wallichiana*] from the Himalayan region was named to commemorate him.

The ophthalmologist Carl Peter Thunberg [1743-1828] was allowed to travel widely in Japan at a time when it was closed to most foreigners. His skill as an eye surgeon was an entry to collecting and introducing many plants to European gardens. The Japanese black pine [*Pinus thunbergii*] was named to commemorate this collector.

Both Bhutan pine and Japanese black pine can be seen in our collections.



The cherry blossom camellia [*Sakuraba tsubaki*] has delicately fringed leaves resembling those of a flowering cherry.

Detail of a camellia pattern on an ancient Japanese kimono, or robe.

Young Ginkgo biloba tree



A modern Chinese brush-painting on silk shows a finch with scarlet camellia blossoms.



Plants on the move, ancient species and ornamentals travel the world

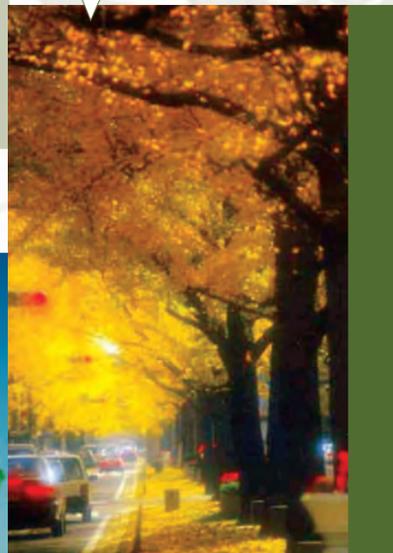
Not only plants were taken from Asia back to Europe, so were the garden styles. Elements of the tour and temple gardens, classics of China and Japan, and the water gardens of the Indian Moguls provided inspiration. Some plants have been on long journeys as continents drifted, their range shrinking over millennia; others have travelled the world in a relatively short time.

The deciduous maidenhair tree [*Ginkgo biloba*] is an ancient ornamental species from China whose relatives first appeared about 300 million years ago. Ginkgo was grown in formal gardens, but was thought to be extinct in the wild until discovered in isolated mountain areas. Tolerant of industrial pollution, it is now used as a city street tree. It produces an edible nut and provides several medicinal extracts. Ginkgo can be seen in our Gondwana collection.

The dawn redwood [*Metasequoia glyptostroboides*], a plant once known only from fossils, was rediscovered growing in China in the mid 1930's and brought into cultivation. A deciduous species related to the North American redwoods, it lines the Arboretum's Mary Houghton Entry Avenue.

In Japan, cherry blossom is culturally important, with a holiday and festivals being held to mark its appearance in spring. After 1,000 years of cultivation, the original parent species of most cultivars of Japanese cherries are now obscure. Today, flowering cherries form an important element in western gardens.

The Ginkgo biloba tree lining the city streets of Osaka



Camellia patterns are still popular on the wares of all Japanese porcelain manufacturers. Here are examples of modern Imari and Kutani ware.



A tea house

Tea and flowers, the Camellia

The Camellia is a well known flowering garden plant. More than 200 species occur in the wild, concentrated in southern China. Many of these plants are frost tender.

The Camellia has been cultivated in China and Japan for centuries, slowly being acclimatized to extend its range from the warmer sub-tropical regions into colder, more northerly gardens. These cold-tolerant plants caught the attention of western plant hunters, as they could survive in the gardens of Europe and North America. Now over 800 cultivars have been bred for garden use.



Several species can be used to make tea, among them *Camellia sasanqua*, which produces nan shan cha, literally southern mountain tea. The black tea commonly drunk today is made from the leaves of *Camellia sinensis*. Plantations of this variety were established in the hills of the then British colonies of India and Ceylon (now Sri Lanka). Tea is grown today in several places in Australia, including the Atherton Tablelands in Queensland.

The trade in tea from China, exchanged for opium from the East India Company, resulted in the Opium Wars and the subsequent opening of China

Robert Fortune

to western traders.

Scottish botanist and traveller Robert Fortune made five plant collecting trips, four to China. His second trip in 1848 was "for the purpose of obtaining the finest of the tea-plant, as well as native manufacturers and implements, for the government plantations in the Himalayas". Fortune successfully collected tea plants from five areas and supervised the transfer of 20,000 young plants and approximately 17,000 seedlings, along with eight Chinese tea growers and their equipment, to the foothills of the Himalayas.

Tea plantations were established in Assam and Sikkim, and tea became one of northern India's principal exports during the second half of the nineteenth century. The importance of tea is shown by the value of imports into Britain, which rose a staggering 837 per cent in the seventy-five years between 1854 and 1929.

Fortune's often forgotten fourth trip (1858-9) was on behalf of the government of the United States of America, which wished to establish its own tea industry. As a result of his explorations 32,000 plants were grown, but the American civil war effectively ended the plan.

Fortune also introduced bonsai to the west. The chusan palm [*Trachycarpus fortunei*], renowned for its cold-hardiness, commemorates his collecting. Several may be found in our Eastern Asia collection.



Limes [*Tilia species*]

The leaves shown below are samples of limes from the US, Europe and Asia and show the similarity between the leaves and fruits.

The map shows the distribution of their former land connections between the continental plates.

The figures in the red areas show the number of species in each floristic region covered by the plants distribution.



American Lime
Tilia americana
Europe 5

Broad-leaved lime
Tilia platyphyllos
US 5

Mongolian Lime
Tilia mongolica
Asia 13

