

### *Vanilla planifolia*

[Synonyms : *Lobos oblongus aromaticus*, *Myrobroma fragrans*, *Vanilla aromatica*, *Vanilla fragrans*]

**VANILLA** (English, Hindi, Kannada, Malayalam, Punjabi, Spanish, Tamil, Urdu) is an evergreen climbing orchid. Native to tropical America (particularly Mexico) it has slightly fragrant, greenish-yellow or orange flowers with a yellow-haired lip.

It is also known as *Echte Vanille* (German), *Orchidée* (French), *Vainilla* (Spanish), *Vaniglia* (Italian), *Vanigliero* (Italian), *Vanilj* (Swedish), *Vanilja* (Finnish), Vanilla plant, *Vanille* (Creole, French, German), *Vanillier* (French), *Vanilovník plocholistý* (Czech), *Vanilya fidant* (Turkish), *Vanilye fidam* (Turkish), *Viniglia* (Italian), and *Vinigliero* (Italian).

The flowers open for a few hours each morning to be pollinated in the wild by specific kinds of bees and humming birds also native to the area. The flowers drop if unpollinated, otherwise they develop within 4 weeks. The long yellowish-green fruit pods (beans) contain black pulp which surrounds up to 90,000 small shiny, nearly black seeds. The fruit pods ripen in 6-9 months from fertilization and although odourless become aromatic after processing. Over a two month period one vine can bear 1,000 blooms. Cultivated plants are supported by stakes and are pollinated by hand, particularly in areas eg. Asia, outside their natural habitat where the necessary species of bees and humming birds do not exist. Cultivated orchids are grown in plantations because the economics and practicability of hand pollination demand a concentration of plants and offers some explanation as to why there are few ‘vanilla plantations’ in Latin America.

The nearly ripe pods (known as ‘vanilla beans’) are harvested by hand in Autumn just before they split open. They are immersed in hot steam and then fermented in warm alcohol and water (for up to 4 weeks) to draw out the flavour. The unprocessed fruit is soft and flexible but becomes very thin and turns dark brown. It also becomes fuzzy and ‘frosted’ with crystals – known as *givre* (French for ‘hoar frost’) in trade circles – which give the characteristic flavour and smell. The liquid is drained off, strained and aged for about 1 month.

Warning – excess intake can cause inflammation and irritation. Inhalation of large quantities can cause headaches and lassitude, and it may be unsuitable for anyone suffering from gallbladder or liver diseases. Prolonged contact with the vine can cause dermatitis.

*Planifolia* is derived from Latin *planus* (flat, even, level) and *-folia* (leaved) components meaning ‘flat-leaved’.

Vanilla vines had long been harvested by the time Europeans set foot on American soil in the late 15<sup>th</sup> Century. The Aztec élite used the fermented vanilla pod to spice their cocoa and it was this practice that drew the attention of the conquering Spaniards. The Spanish conquistador, Hernando Cortés (1485-1547) led his small expeditionary force into Mexico eventually reaching its capital, Tenochtitlàn, on the 8<sup>th</sup> November 1519. He was received warmly by Montezuma II (1466-1520) who was the last Aztec emperor and was about to suffer dreadful indignities (together with his people) as well as death at the hands of the Spaniards. Unaware of what was to come however he gave a great welcome to the invaders as he mistook Cortés for the long awaited god from the east. In the following months Cortés and his men watched many of the Aztec customs. Not least of

these was the sight of the Aztec Emperor drinking chocolate and it is said by some authorities that it was a soldier-historian, Bernal Díaz del Castillo (c. 1492-1581) who found out that one of the flavourings was ground vanilla pod. But it seems that the Spanish conquistadores had not really appreciated what they had witnessed and vanilla does not appear to have crossed the Atlantic with them when they returned to Spain.

It was known of in Elizabethan England as the French botanist, Clusius (1525-1609) is said to have received some (what may well have been decomposing) pods from Queen Elizabeth I's (1533-1603) apothecary Hugh Morgan in 1602 – and later that century vanilla is believed to have been growing (as a curiosity) in France. But its joys as a food flavouring seem still to have evaded Europeans as a whole – although some natural historians say that the French began to add it to chocolate drinks in the 16<sup>th</sup> Century, as well as flavouring tobacco mixtures with it. But in the 18<sup>th</sup> Century things changed. It not only gained some recognition for medicinal qualities but also began to be more readily available (both Britain and France were obtaining vanilla from their respective American colonies) and it was certainly a flavouring associated with drinking chocolate. Some authorities believe that it was Mrs. Hannah Glasse's (1708-1770) cookery book published in 1747, *The Art of Cookery Made Plain and Easy*, that was the first to mention vanilla. In 1776 a French advertisement for chocolate declared a price of

..... three pounds containing half a vanilla bean, four pounds with a whole vanilla bean, and five pounds with two vanilla beans.

Then Thomas Jefferson (1743-1826), who was destined to be the third President of the United States, met vanilla for the first time when he was in Europe. Upon returning home he found to his disappointment that it was unobtainable in Philadelphia where he was taking on the role of Secretary of State and in 1789 he wrote to the American chargé d'affaires in Paris

..... To send me a packet of 50 pods (batons) which may come very well in the middle of a packet of newspapers. ....

The first vanilla plantation was established in Java (now an Indonesian island) by the Dutch in 1819 – yet to the end of the 1800s Mexico was still set to monopolize supplies. In 1821 the French followed the Dutch example with a plantation on La Réunion. But the Europeans found that the fruit would not set in alien surroundings. It was only discovered then that in their native habitat in Mexico the flowers are pollinated by species of bees and humming birds found nowhere else in the world. The answer was elusive until, it is claimed, a French gardener at the Museum of Paris named Neumann devised a method of artificial pollination in 1830. This technique was then used on their plantations on La Réunion. On the other hand the Belgian's give the credit to one of their botanists, Charles Moren who is also understood to have proposed a method of hand pollination but in 1836. It is said that it is the latter technique that is still practised today outside the plant's natural home – and often in it as well as the indigenous bees have been at the mercy of pesticides.

In 1964 the Vanilla Alliance was set up consisting of the Comoro Islands, Indonesia, and the French island of La Réunion. Between them they now produce 80% of the world's output today. This is divided into 3 grades:

Fine or Legitimate vanilla – which produces 8-12 in. long, thin, shiny frosted, almost black pods,

Woody or Bastard vanilla – which produces 5-8 in. long, slightly frosted, dull reddish-brown pods,

Vanillon – that produces 4-5 in. long, thick flattened, soft, often split, brown pods. This has the strongest smell which is coarse – and has the least flavour.

There is also a yellowish variety from the West Indies that is almost odourless. The most sought after is the Mexican vanilla (most of which ends up in North American ice cream), followed by the Bourbon vanilla from the Indian Ocean (primarily Madagascar) – and then harvests from elsewhere.

There are several plants which contain vanillin including asafetida (*Ferula assa-foetida*), benzoin (*Styrax benzoin*) and some conifers – and a synthetic substance called Vanillin has been obtained with the help of clove oil (*Syzygium aromaticum*) – but connoisseurs claim that the taste of natural vanilla (made up of 35 components) and the aroma of its essence has never as yet been successfully reproduced. The natural substance always has more flavour. As a result natural vanilla is now the second most expensive spice after saffron (*Crocus sativus*) because it is relatively scarce and like saffron its production is particularly labour intensive.

Apart from its use as a flavouring in food (especially in chocolate and ice cream) and drink as referred to earlier, vanilla is also used in cosmetics and perfumery. It is an ingredient in the classic perfume L' Aimant, introduced in 1927 from the famous and eponymous perfumery house established by the French industrialist and newspaper proprietor, François Coty (1874-1934).

An unusual and relatively recent application for vanilla (usually in inferior synthetic form), apart from its use in zinc plating baths, involves harnessing its qualities that prevent foaming for use in lubricating oils.

Medicinally, it has been used locally for treating hysteria, some types of fever, and loss of appetite.