

Garden of colour plants

Vedrin, Rue Frères Biéva, 203 – on the site of the “Green Spaces” department

Why a garden of colour plants?

Plant dyeing is an art that has evolved over thousands of years of practice, experience and learning. An art based on knowledge of these plants that produce substances which can be used to dye fibres. This garden takes you into this magical world of natural colour to show you a different view of the wealth of Mother Nature, and different view of these small, insignificant plants, some of which have changed the history and appearance of the world. The plants presented in this garden have been used by generations of artists, dyers and colourists to add hues of red, blue and yellow, a rainbow of colours, to precious tapestries, brocades, silks and cottons, some of which have kept their colours unfaded down the centuries. These techniques, the only source of textile colours until the 19th century, have now been replaced by synthetic products. And yet this know-how, which has passed on its colours through the ages, proves indispensable when restoring the ancient works that are part of our cultural heritage or to offer the artists of today materials that will remain intact tomorrow.

The garden of colour plants

The garden itself contains over 130 colour plants. A first. Of course, these plants that have the power to dye, our textile fibres in particular, all have their own specific features. Some of the colours obtained are fleeting, while others may last through the ages. These plants have a history, too. Some of them have been coveted by men, arousing passion in generations of dyers and brimming with anecdotes that are sure to surprise you. To make the garden clearer, the plants are arranged by theme. Why not come and find out about some of them, to give you a foretaste of the diversity of the collection.

For the Mediterranean and exotic plants: gromwell

Gromwell (*Lithospermum erythrorhizon*) grows on the sunny, uncultivated grasslands of China, Korea and Japan, and around the Amour river in Russia. Zi Cao, “purple herb” in Chinese, has been used since the 6th century. In Japan, fabrics dyed using shikonin were reserved for the Imperial family and the highest ranking officials at the court. Famous for its beauty and its elegance, it is mentioned in 17 poems in the oldest anthology of Japanese verse. In the 19th century it was known in the West as *murasaki* (Tokyo Purple). It is forbidden to pick this plant in Japan today. The roots still used by a few, rare professional dyers are imported from China.

For the ornamental plants: the hollyhock

The petals of the dark purple hollyhock (*Alcea rosea* “nigra”) contain a blend of anthocyanins that produce violet to purplish blue shades. In the 19th century, it was used industrially in Germany and especially in Bavaria to dye cotton fabrics. It was also used to enhance the colour of red wines. Turkey produced almost 700 tonnes of dried flowers a year. It was grown in central Asia for its ornamental qualities, as well as to dye silk and leather. Black hollyhocks are thought to provide a concentrated extract of anthocyanins that can be used as a food colorant and that also protect the blood vessels.

For the edible plants: rhubarb

The cultivated rhubarb we know (*Rheum rhabarbarum*) is less rich in pigments than Chinese rhubarb or medicinal rhubarb. The main part of the plant used is the rhizome, which produces various shades of orange that remain stable, resistant to light and to washing. The leaves can also be used to make a dye that is yellow but is less resistant. In Tibet, rhubarb is the main source of yellow and orange dyes for Tibetan carpets. The juice of the stems is used as a mordant or as a reducing agent in indigo vats.

For the indigenous woody plants: wild privet

The ripe berries of the wild privet (*Ligustrum vulgare*), rich in anthocyanins, give a blue colour. In addition, the bark, which contains tannins, the leaves and the young stems provide yellow thanks to flavonic pigments. Privet berries, along with juniper berries, are among the rare dyes mentioned from the 16th century onwards as producing green in a single dip, after mordanting with alum or copper. Dyers in the 19th century even endeavoured to promote its use to dye cotton and silk.

For the indigenous herbaceous plants: broad-leaf dock

The roots and rhizomes of broad-leaf dock (*Rumex obtusifolius*) are usually used. However, the leaves are also used as plant mordant or to obtain green shades. In addition to anthraquinone pigments, docks contain high levels of tannin. Consequently they can be used without mordanting, although this is still advisable to obtain more saturated shades. Dock dyes with iron mordanting are one of the traditional recipes for obtaining black in Scotland and Ireland. The stems and leaves were also used to enhance the solidity of indigo dyes. In Tibet wool is mordanted by boiling it in a brew of stems and folded leaves. The wool then takes on a green hue and can be dipped into another batch of dye.

For the aquatic and water's edge plants: reed

A number of grasses are traditionally used in Japan to dye fabrics yellow. Yoshi (*Phragmites australis*) or common reed, as well as susuki (*Miscanthus sinensis*) or zebra grass both contain a flavone, triclin, as the main colorant. The common reed is also one of the two host plants of the Armenian mealybug, a small insect found in salty marshes, the adult females of which are gathered when they emerge to mate. This type of dye is mainly used for wool, mohair and silk.

Garden design and creation: Municipal research department and "Green Spaces" department, in conjunction with "Histoires de Plantes" asbl

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