

## Natural Ancient and Medieval Dyes Presently Imported or Manufactured in Europe

### References:

1. William F. Leggett, Ancient and Medieval Dyes
2. Jean K. Carman, Dyemaking With Eucalypts&#59;
3. Arleen R. and Alan E. Bessette, The Rainbow Beneath My Feet or A Mushroom Dyer's Field Guide

### Madder

The name for madder is Red. It appears in Arabic as *al zan* in Greek as *erythrodanion*, in Roman as *rubia* and in German as *rote*. The bulk of pigment is contained in the red mass, between the outer skin and the woody heart of the root. The dye is being presented in the form of glucosides which are quite easily separated.

### Indigo

Long regarded as the most important of all dyestuff, indigo is a vegetable blue dye of great natural fastness to both light and water. For over 4000 years, it has been known for people of Asia as a dye and as cosmetic. It derives its name from *indicum*, a Latin word originally used to define all imports from India in medieval times and later specifically applied to a beautiful blue dye of India replacing the anciently used Arabic word *al-nil*, which meant Blue. When ready for its simple processing, it is cut down early in the morning and, as quickly as possible, placed in vats and steeped in water for a period varying from 9 to 14 hours. In ancient times, the liquid, which varies in shade from yellow-orange to olive-green, is drawn off to beating vats, where it is exposed to oxidation by air, by means of striking the surface bamboo sticks. Nowadays, this process has been little modified. This operation causes a gradual change in the color of the liquid, it becoming dark green, and finally blue.

### Woad

To prepare the blue dye, the newly gathered, selected leaves, cut off at their base, is quickly crushed or ground to pulp. It was quite early discovered that young leaves supplied a light blue dye, mature leaves - a darker blue, whereas fully ripe leaves provided a bluish-black pigment. Many Europeans were engaged in woad cultivation. However, the introduction of indigo from India in the 16th century and of synthetic dyes in the later 19th century, reduced the use of woad to the vanishing point. Historical fact: It is recorded that Queen Elizabeth so disliked the odor, which came from the fermentation of woad that she ordered that, during her "progresses through the country, she might not be drive out of the towns by

the 'oade' infecting the air too near them". The sowing of woad plants was forbidden within 5 miles of any of Queens' residences.

### Saffron

The name of this plant is derived from the Arabic word *za faran* meaning *yellow*. This versatile plant was one of the main trade commodities for medieval cooks and physicians, as well as dyers. The dye is obtained from the pistils of the *Crocus Sativus*, a plant which flowers in September-October and is quite distinct from the *Crocus Vernis* - a common spring variety. Monks discovered that by its use in connection with an iron mordant, the obtained dye colour resembles gold. Saffron was cultivated in Persia, and from there, found its way into China.

### Safflower

Safflower plant provides a basic yellow dyestuff, similar to true saffron, although these two plants are in no way related to each other. The safflower's dye content consists of a water-soluble yellow and a water-insoluble red component, the two affording an orange hue. The dye is centered in the plant's floret heads. When in full bloom, these florets are carefully dried in the sun, to obtain an orange colored fibrous mass, resembling saffron, or they are first kneaded in water in order to remove the fugitive yellow coloring matters, in favour of a reddish-yellow tint, and then pressed into cakes. Safflower owes its dyeing value to a small content of insoluble red coloring matter. The versatility of this vegetable dye, especially when used with various acids and alkalis, is such that it will transmit yellow, orange, red, and shades of pink, but at best, it is a very weak dyeing agent, requiring from 4oz to 1lb of extract per 1lb of fabric to be dyed, to obtain shades of colour ranging from pink to crimson.

### Weld or Woald (*Reseda Luteola*)

It grows wild in waste places, in many parts of the world. The whole plant, except the roots, serves for dyeing purposes. The seeds and upper portion of the plant are the richest in pigment. It was anciently known as "dyers' broom" and "dyers' weed", remaining supreme for yellow pigments during many centuries until it was replaced by fustic in 16th century in Europe. Weld is of greater antiquity than any other yellow dye source, and was highly prized by the ancient Romans.

### Brazilwood

Three years after Vasco da Gama had opened the Cape of Good Hope route, a Portuguese expedition, bound for India, lost its course and finally landed on the northeast coast of South America. Observing the large number of brazilwood trees, which were well known to them because of trade with India, they

named the country "Terra de Brazil" and one of the earliest maps of the world first used that name, but applied it to the entire northern portion of South America. True brazilwood is known botanically as *Caesalpinia Echinata*, and about 9 varieties of this tree have been used for dyestuff & various leguminous trees, including the lima, sapan, and peachwood, are classed as brazilwood or so-called soluble redwoods, to distinguish them from the barwood family of trees which only yield coloring matter dissolving with difficulty and only in boiling water. These medium-size redwood trees is cut into small sections, after which the units is rasped to coarse powder, moistened with water, and fermented for 5-6 weeks, in order to increase the colouring properties of the wood. Used with an aluminium mordant, this soluble redwood gave all kinds of fabrics, including silk, a bright red shade with bichromate of potash (as a mordant)- a purple-red shade is obtained. Today, brazilwood is supplied almost exclusively by Brazil, and in small quantities from Jamaica and central America. Brazilwood is occasionally used in conjunction with garacine, a logwood subsidiary, when a chocolate tint is desired.

### Longwood

Also known as *Campeachy wood* because it was discovered by the Spaniards on the shores of the Bay of Campeachy in Mexico. It is peculiarly adapted for dyeing purple on wool, blue and violet on silk, and is important as a black cotton dye. The colouring matter exists naturally in the wood fiber. Freshly cut wood is colourless until exposed to oxidation by air, when the outside become a dark reddish-brown, whereas the inside becomes a pale yellow or orange. Longwood comes to the market in large blocks, each weighing up to 400 pounds. These are reduced to chips or to a paste, in which form it is aged by thoroughly by wetting the mass and then heaping it in piles from 4 to 6 feet high. Because this process usually takes place indoors, fermentation is accelerated, and the logwood chips or paste requires constant attention. If fermentation proceeds too far, much of the coloring matter will be destroyed.

### Barwood

It is a hard resinous wood, which grows in the equatorial regions of Western Africa and provides a color of deeper blue than do its unimportant relatives such as camwood and sander. Wood from these trees is first ground and then boiled as chips or as it was in ancient practice, enclosed in bags suspended in boiling water.

### Camwood

This tree which grows in Western Asia, is similar to barwood in its chemical structure, but is more abundant in coloring matter, producing a more intense red than does barwood.

### Fustic

Even today, it is an important natural dyestuff, botanically known as *Chlorophora Tinctoria*. It is the golden-yellow wood of a large tree of the Mulberry family, which grows wild in the West Indies and tropical America. The old fistic is grown in Cuba, Jamaica and Brazil. Fistic is used as an extract, in combination with logwood, for dyeing wool and cotton various shades of Brown or Olive.

### Orseille or Archil

is a lichen growing on the rocks of many Mediterranean islands. In the remote past, peasant dyers of this area used Orseille for simple coloring purposes, when a purple shade was desired. Orseille had its first use at Florence. Because of the good reputation of Italian orseille-dyed cloth, they built up a foreign trade in Orseille dye paste and ultimately supplied it to English, Flemish and German cloth merchants. Archil was the most important lichen dye derivative of ancient and medieval cloth dyers, but other lichens were sometimes also used. For example: *Lacmus* (from Norway), *Roccella fuciformis*, *Variolaria orcina*. Dye lichens have also been found on the coasts of California, where attempts have been made to develop an American Orseille industry.

### Cudbear

This fine powder of Lilac colour is derived from lichens, especially *Lecanora tartarea*.

### Annato

For centuries, it has been used as an orange-red dye obtained from the pulpy portion of the seeds grown by the *Bixa orellana*. After seeds and pulp had been removed from mature fruit, the residue was macerated in water, the product strained, and the coloring matter collected, then dried in the sun and formed into cakes.

### Turmeric

In Latin, *Terra Merita* is botanically known as *Curcuma longa*, a native of India and China. The yellow dye was obtained from its roots. When ground, they produce a bright yellow powder that was anciently used for dyeing silk and wool, varying in colours from light yellow to orange.

### Cutch

It is an extract from the wood *Acacia catechu* and the *Mimosa* trees. The best cutch appears on the market in the form of square blocks weighing from 28 to 56 lb each. The second quality cutch is in tablets (1-2 lb each), and the cheapest quality appears as large cubes. Cutch wood is gathered when the acacia trees are still green and quite full of sap. The bark is first stripped off, the timber chopped in a large cauldron. When the extract, an almost black substance, becomes thick while it cools, it is molded into forms.

### Gambir

It is, chemically similar to cutch, an Asiatic plant, which leaves and young twigs were boiled to secure a pale-brown or yellow dyestuff which was locally used.

### Quercitron

A crystalline yellow substance, obtained mainly from the inner bark of *Quercus nigra* (Black Oak) or *Quercus citrina* (Lemon-Coloured Oak). The inner bark is reduced to powder by grinding and provides as much colouring matter as ten parts of weld or four parts of old fustic. Quercitron occurs in small quantities in both apple tree bark and horse chestnut leaves.