

Over four thousand years ago, people in China were using dyes to colour cloth. We know this because someone wrote about it!



In ancient Egypt, King
Tutankhamen was wearing
clothes dyed red, using
madder. There were also
many cloths around the
mummies that were dyed
in stripes of indigo. But
the MOST expensive and
valuable dye was Imperial
Purple!



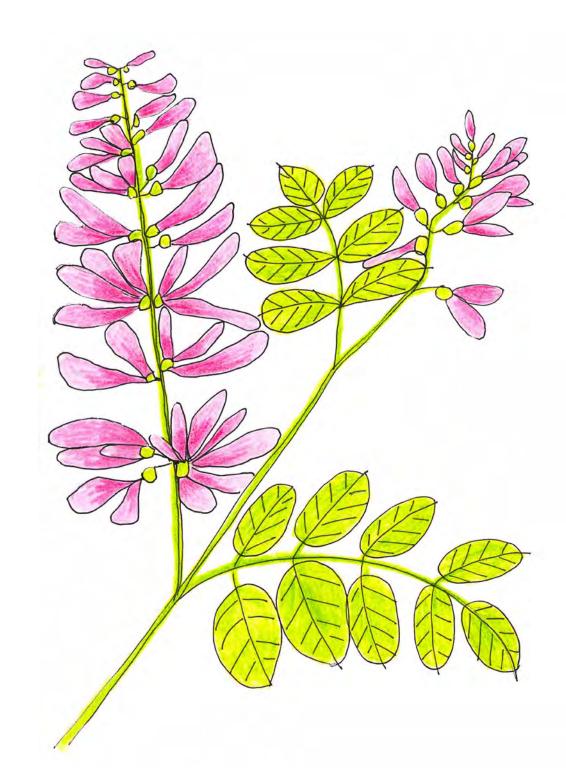
The main natural dyes of the ancient and medieval times were:

- 1. Indigo
- 2. Madder
- 3. Woad
- 4. Weld
- 5. Brazilwood
- 6. Imperial Purple



1. Indigo

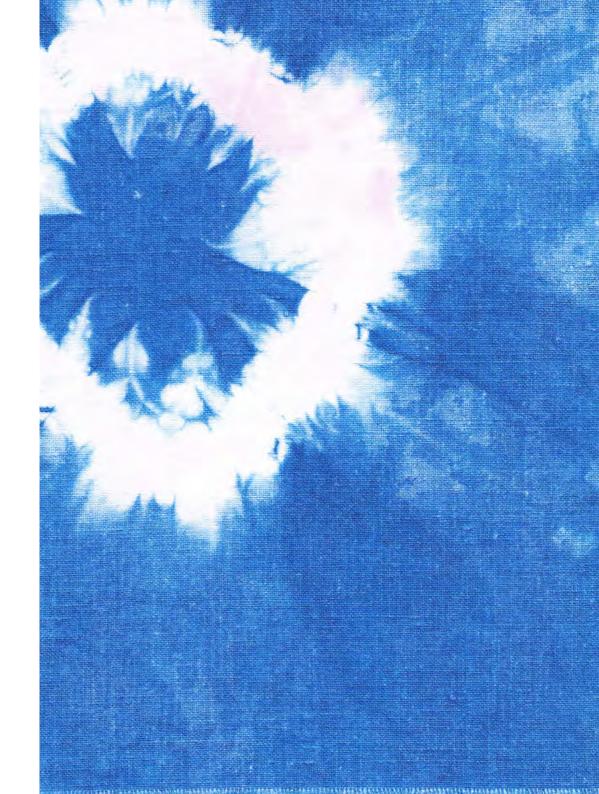
The first mention of this dye comes from the Indus valley in Asia about 3000 years ago. People in what is now India, Pakistan and Bangladesh used a group of plants called Indigofera to get a deep blue dye.



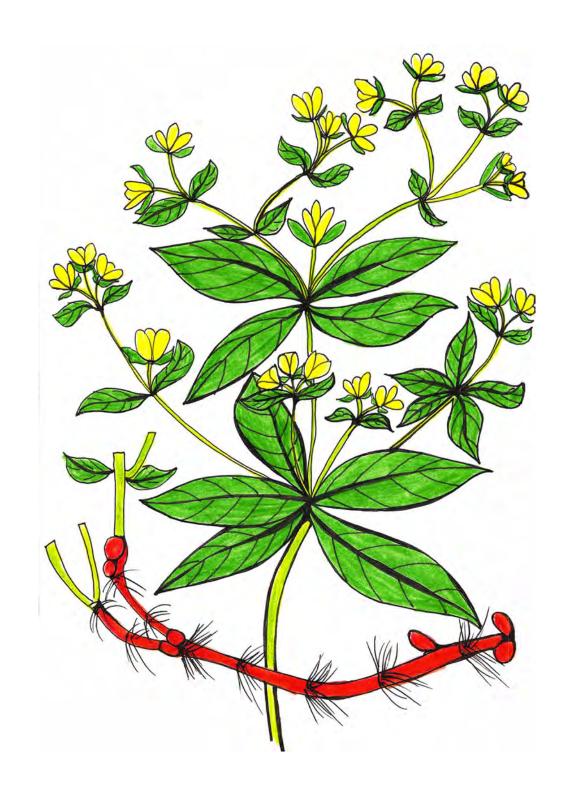
The blue dye has to be extracted from the leaves of the plant by adding soda ash. This is found in the ash of burning kelp — a sort of seaweed.



Indigo was a highly popular dye. This may partly have been because indigo-dyed cloth seems to change magically as it dries. It slowly transforms from pale yellow to green and then finally to blue.



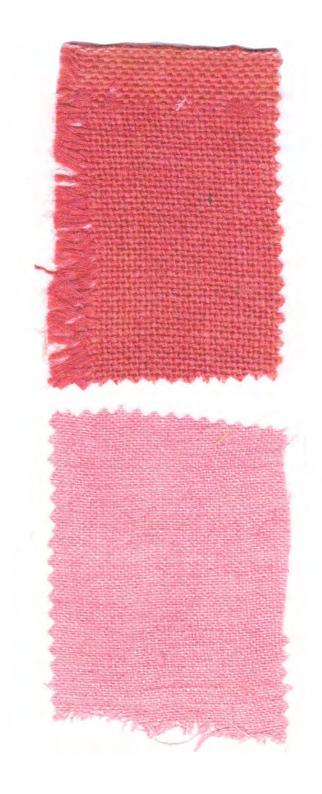
2. Madder Madder plants are used to make a deep red dye, which has been around for over 4000 years. We know that the ancient Egyptians used it, and it was commonly used in Medieval Europe.



To get the dye from the plants, you have to dig up, clean and boil the roots. You need to add chalk - not the sort of chalk we use on blackboards, but the sort that is found in seashells, snail shells and egg shells.



Madder produces a lot of different reds, depending on several things, such as heat and time. Madder roots were fed to white horses to colour their hooves and teeth. The Romans fed it to sheep to dye their wool!



3. Woad

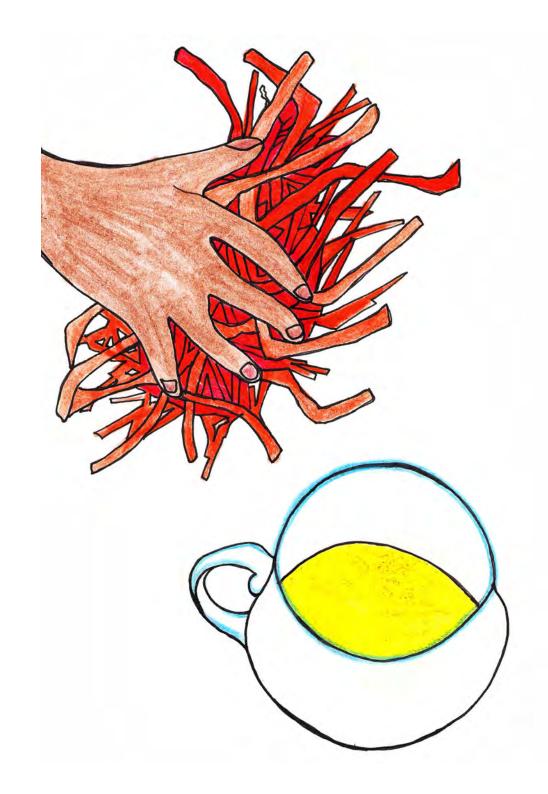
This is a plant which grows well in Europe. It is related to the cabbage and broccoli plants. It grows for two years and then dies down. The leaves must be picked in the first year to make the dye.



Woad dye results in blue fabric. It can, with repeated dying, create a dark blue very like indigo. For this reason, it is not always easy to say if some ancient cloths were dyed with indigo or with woad.



A method of dying using woad used for thousands of years involves using pee! You would add a lot of urine to powdered woad dye. It was also common to mix woad with madder to get different blues and purples.



4. Weld

This is a tall plant with long spikes on which grow small yellow flowers. Bees love these flowers. The deep yellow colour comes from the leaves, flowers and seeds of the plant.



Weld is another ancient dye and was used by the Romans, especially to dye cloths used to dress women.



If a piece of cloth dyed in weld is then placed in a blue dye made from woad, it produces a bright green called Lincoln Green. This was supposed to be the dye used for the clothes worn by Robin Hood and his Merry Men.



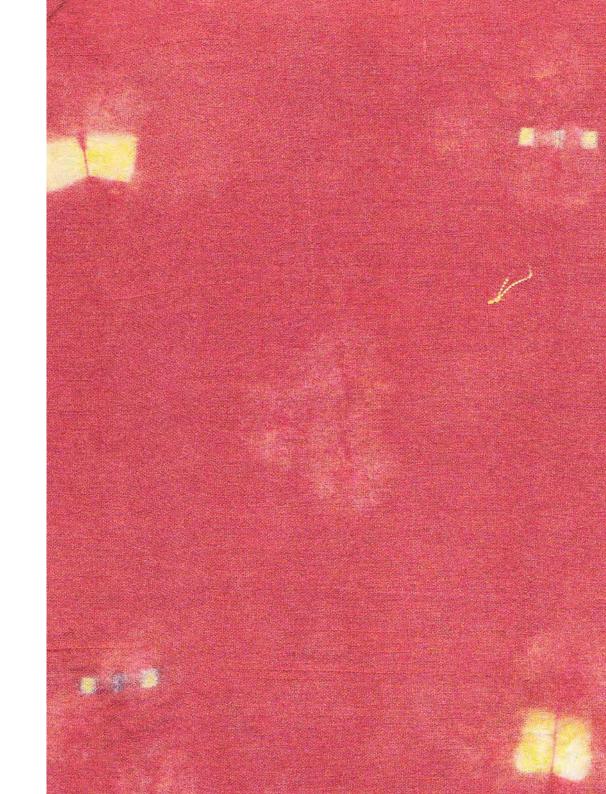
5. Brazilwood
This dye comes from
flowering trees which
grow wild in Brazil. In
fact, our name for Brazil
comes from these trees and
the red dye you can get
from them. Brazil is the
only country in the world
named after a natural dye!



The brazilwood dye also comes from sappanwood trees which grow in India and other parts of Asia. These trees are common, but the brazilwood trees are now endangered.



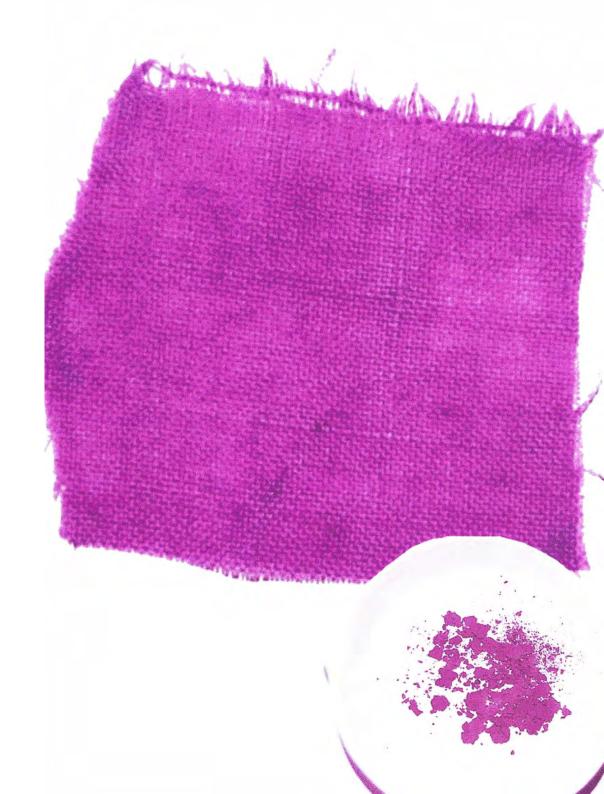
To make the red dye, you need to reduce the wood to sawdust, making sure that you are using the 'heart wood' or core. The sawdust is then soaked in water for a long time, to extract the colour.



6. Imperial Purple
This was an immensely
valuable dye in the
ancient world. It was
obtained from a small
shellfish, a little like a rock
snail, which lives on the
Mediterranean coast.



It was not easy to get the dye from the small shellfish. The creature is killed and the dye extracted with a small sharp tool. It was said that it took 8,500 shellfish to make less than a teaspoon of powder. So this dye was much more expensive than gold!



Because this dye was so difficult to get, it was used only to colour the clothes of very important people like emperors and kings. Cloth dyed in this purple does not fade. It gets deeper and more colourful as it gets older. This was another reason why it was so valuable.



Natural dyes are amazing! They give us the richest and brightest colours and a lot of different shades. The very best way to understand this is to dye some cloth for yourself using a natural dye!



PGCs	PGCs
/c/ as <u>c,</u> /t/ as <u>t,</u> /a/ as <u>a</u>	/cw/ as <u>qu</u> /, /cs/ as <u>x,</u> /y/ as <u>y</u>
/d/ as <u>d,</u> /g/ as <u>g,</u> /o/ as <u>o</u>	/oa/ as <u>ow, o, oa, oe, o-e</u>
/m/ as <u>m</u> , /n/ as <u>n</u>	/ooh/ as <u>oo, ew, o</u>
/i/ as <u>i,</u> /s/ as <u>s</u> and <u>ss</u>	/z/ as <u>z</u> , zz and <u>s</u> , /g/ as <u>gu</u> and <u>gh</u>
/u/ as <u>u,</u> /r/ as <u>r</u>	/er/ as <u>er, ur, ir, ear, or</u>
/h/ as <u>h,</u> /l/ as <u>l</u> and <u>ll</u>	/s/ as <u>c, se</u> and <u>ce</u>
lel as <u>e,</u> lbl as <u>b</u>	/j/ as g, ge and dge
/f/ as f and ff, /sh/ as <u>sh</u>	/l/ as <u>le</u> + <u>tt</u> , gg, <u>bb</u>
/p/ as <u>p,</u> /c/ as <u>k</u> and <u>ck</u>	/ue/ as <u>ew, u-e</u> and <u>u</u>
leel as y, lpl as pp (+ <u>mm, dd,</u> <u>rr, nn</u>)	/ch/ as <u>tch,</u> /oy/ as <u>oi,</u> <u>oy</u>
leel as <u>ee, ea, e</u>	/ooh/ as <u>ue</u> , <u>u-e</u> , <u>ui</u> /c/ as <u>ch</u> , (/ooh/ as <u>ou</u>)
/w/ as <u>w</u> and <u>wh</u> *, /ch/ as <u>ch</u>	/air/ as <u>ear, air, are,</u> (<u>ere, eir</u>)
/th/ as <u>th</u> , /ng/ as <u>ng</u>	/u/ as <u>o, ou,</u> (<u>o-e</u>) /f/ as <u>ph</u> and <u>gh</u>
/tthh/ as <u>th,</u> /v/ as <u>v,</u> <u>ve</u>	
/oo/ as <u>oo, u</u> and <u>oul</u>	/ay/ as <u>a</u> , <u>eigh, ea, ey</u>
/j/ as j, /ar/ as <u>ar</u> and <u>a</u> *	leel as <u>ie, ey;</u> lorl as <u>ar</u>
/ou/ as <u>ou, ow</u> and <u>ough</u>	/or/ as <u>oor, oar</u> and <u>au</u>
/or/ as <u>or, ore, aw</u> and <u>a</u>	/or/ as <u>ough</u> , <u>our</u> , <u>augh</u>
/ay/ as <u>ay, a-e, ai</u>	/or/ as <u>al</u> ; /t/ as <u>ed</u>
/ie/ as y, <u>ie, i-e,</u> <u>i</u> and <u>igh</u>	/d/ as <u>ed;</u> /ng/ as <u>n</u>
	/sh/ as <u>ti, si, ci, ch</u> /zh/ as <u>si, as</u> and <u>s</u>

Code-Breakers

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