



## Tyrian purple

From Wikipedia, the free encyclopedia



Two [shells](#) of [Bolinus brandaris](#), also known as the Spiny dye-murex



**Tyrian purple** ([Greek](#), *πορφύρα*, *porphyra*, [Latin](#): *purpura*), also known as **royal purple**, **imperial purple** or **imperial dye**, is a purple-red [natural dye](#), which is extracted from sea [snails](#), and which was possibly first produced by the ancient [Phoenicians](#). This [dye](#) was greatly prized in antiquity because it did not fade, rather it became brighter and more intense with weathering and sunlight.

Tyrian purple was expensive: the [4th-century-BC historian Theopompus](#) reported, "*Purple for dyes fetched its weight in silver at Colophon*" in [Asia Minor](#).<sup>[1]</sup> The expense meant that purple-dyed textiles became [status symbols](#), and early [sumptuary laws](#) restricted their use. The production of shellfish purple was tightly controlled in [Byzantium](#) and was subsidized by the imperial court, which restricted its use for the colouring of [silks for imperial use](#).<sup>[2]</sup> so that a child born to a reigning emperor was *porphyrogenitos*, "[born in the purple](#)", although this term may also refer to the fact that the Imperial birthing apartment was walled in the purple-red rock known as [porphyry](#).

The dye substance consists of a mucous secretion from the hypobranchial gland of one of several medium-sized [predatory](#) sea [snails](#) found in the eastern Mediterranean. These are the [marine gastropods](#) *Bolinus brandaris* the spiny dye-murex, (originally known as *Murex brandaris* (Linnaeus, 1758)), the banded dye-murex [Hexaplex](#)

The majority of the information (other than Scripture) for tonight's study came from [Women of the Bible](#) written by *Ann Spangler and Jean E. Syswerda*, published by Zondervan Publishing House, Grand Rapids, Michigan and [copyrighted 1999](#).

*trunculus*, and the rock-shell *Stramonita haemastoma*.<sup>[3][4] [4]</sup> The dye is an organic compound of **bromine** (i.e. an **organobromine compound**), a class of compounds often found in algae and some other sea life, but much more rarely in the biology of land animals.

In **Biblical Hebrew**, the dye extracted from the *Bolinus brandaris* is known as *argaman* (אֲרָמָן). Another dye extracted from a related sea snail, *Hexaplex trunculus*, produced an indigo colour called **tekhelet** (תֵּכֵלֶת), used in garments worn for ritual purposes.<sup>[5]</sup>

Many other species worldwide within the family Muricidae, for example *Plicopurpura pansa* (Gould, 1853), from the tropical eastern Pacific, and *Plicopurpura patula* (Linnaeus, 1758) from the Caribbean zone of the western **Atlantic**, can also produce a similar substance (which turns into an enduring purple dye when exposed to sunlight) and this ability has sometimes also been historically exploited by local inhabitants in the areas where these snails occur. (Some other predatory gastropods, such as some wentletraps in the family **Epitoniidae**, seem to also produce a similar substance, although this has not been studied or exploited commercially.) The **dog whelk** *Nucella lapillus*, from the North Atlantic, can also be used to produce red-purple and violet dyes.<sup>[6]</sup>

In nature the snails use the secretion as part of their **predatory** behaviour and as an **antimicrobial** lining on egg masses.<sup>[7][8]</sup> The snail also secretes this substance when it is poked or physically attacked by humans. Therefore the dye can be collected either by "milking" the snails, which is more labour intensive but is a **renewable resource**, or by collecting and then crushing the snails completely, which is destructive. David Jacoby remarks<sup>[9]</sup> that "twelve thousand snails of *Murex brandaris* yield no more than 1.4 g of pure dye, enough to colour only the trim of a single garment."

**Also used was the Madder Plant. (Made a less expensive dye)**



picture from <http://en.wikipedia.org/wiki/Rubia>

**Madder** *Madder is a vegetable dye that has been used since prehistoric times along with the blue dye Woad). A piece of fabric found in the tomb of King Tutankhamen was found to have been dyed with madder. Madder is found in the roots of plants of the madder family (Galium, Asperula), the greatest concentrations occur in species of Rubia, especially the European Rubia tinctorum.*

*At a time when cloth was one of the most important commodities for trading and industry, fabric dyes were often worth their weight in gold. The colors that were easy to produce from nature (browns and blacks) were less costly than bright colors. Red - a difficult color to*

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**produce - was the most coveted color, and red fabrics were often associated with royalty.**

[http://footguards.tripod.com/06ARTICLES/ART33\\_madder.htm](http://footguards.tripod.com/06ARTICLES/ART33_madder.htm)

madder, also called dyer's madder, any of several species of plants belonging to the genus *Rubia* of the madder family, Rubiaceae. *Rubia tinctorum* and *R. peregrina* are native European plants, and *R. cordifolia* is native to the hilly districts of India and Java. *Rubia* is a genus of about 60 species; its members are characterized by lance-shaped leaves that grow in whorls and by small yellowish flowers that grow in clusters.

The common madder (*R. tinctorum*) and *R. cordifolia* were formerly cultivated for a red dye, alizarin, that was obtained from the ground-up roots of these plants. **This dye was used for cloth and could be prepared and applied in such a way as to yield pink and purple shades as well as red.** The dye properties of the madder root appear to have been known from the earliest historical times; cloth dyed with madder has been found on ancient Egyptian mummies, and madder was used for dyeing the cloaks of Libyan women in the time of Herodotus (5th century bc). Madder was also employed as a medicinal treatment for amenorrhea (failure to menstruate) in ancient and medieval times. Another property of alizarin is that it colours red the bones of animals that feed upon madder. This property was used by 19th-century physiologists to trace the way in which bone develops and to study the functions of the various types of cells in growing bone. In the 1860s a way was found to manufacture alizarin synthetically, and so the once-extensive use of madder as a source of alizarin dye has now practically disappeared.

via [madder \(plant\) -- Britannica Online Encyclopedia](#).

### **Act 16:11-13**

1. In ancient time, when there was no synagogue in a city, it was the custom of those who worshipped the true God to gather for prayer outdoors, preferably near running water. Describe the scene created in your mind when you read verse 13.

2. What is your place of community worship like? Where do you think your community would gather for worship if you had no church building?

### **Acts 16:14a**

3. What does the first part of this verse tell you about Lydia? Which of the things you know about Lydia from these few words would you consider most important?

4. Try to construct a sentence about yourself similar to this one about Lydia. Which of the things you list about yourself do you consider your most important characteristic?

**Acts 16:14b**

5. What do you think is meant by the words, “The Lord opened her heart to respond”? If you have experienced something similar, what were the circumstances and what was your response?

**Acts 16:15**

6. Lydia responds to the gospel message with two actions. What are they?

7. How did she persuade Paul and his companions to stay at her house? Why do you think she was so anxious for them to stay with her?

**Acts 16:40**

When Paul and Silas got out of prison, they immediately went to Lydia’s home again. What does this verse say they did there? They had been beaten severely (verse 23) and put in stocks in prison (verse 24); however, they responded not by complaining or moaning over their circumstances but by encouraging the believers in Philippi. How do you think Lydia and her fellow believers responded to what Paul and Silas had to say to them?

9. It can be difficult to minister to others when your own problems and troubles are overwhelming. How can you be an encouragement to those around you in spite of your own trials? More than that, how can you be an encouragement to those around you *because of* your trials?

The Writers of Women of the Bible suggest that we:

This week, invite a few friends to pray with you. Gather in your home or find your own “green sanctuary” outdoors. Sing hymns and ask God for a fresh outpouring of His Spirit in your churches, homes, neighborhoods, and nation. Pray for a greater opening for the Gospel. Perhaps God will create an “uproar” in your city as a result of your prayers.