

~DYES, DYEING (173)

.. Ancient Processes

.. Sources Of Dyes

- The art of **imparting particular hues and tints to thread, fabric, and other materials by employing coloring matter** was known and practiced before the days of Abraham and is probably as old as the art of weaving. The Israelites used such goods as blue thread, coccus scarlet material, and wool dyed reddish purple for the tabernacle and for priestly garments. (**Exodus Chapters 25-28,35,38,39**)

- Dyeing, more of a domestic activity in earlier times, eventually became quite a commercial enterprise in various places. The early Egyptians were noted for their particularly brilliant dyed goods

- Linen in various colors from Egypt your cloth expanse happened to be, in order for it to serve as your sail. Blue thread and wool **dyed** reddish purple from the islands of Elishah are what your deck covering proved to be. (**Ezekiel 27:7**)

- And after Egypt's decline, Tyre and other Phoenician cities became important dye centers.

.. Ancient Processes

- **Dyeing** processes varied from place to place. Sometimes the thread was **dyed**, whereas in other cases the **dye** was applied to finished cloth.

- It seems that thread was bathed in **dye** twice, being squeezed after its removal from the vat the second time so that the valued **dye** could be retained. The thread was thereafter laid out so that it could dry.

- Each material had to be treated in a different way. Sometimes, though rarely, the coloring matter had a natural affinity for the fiber being **dyed**. But when that was not so, it was necessary to treat the material first with a **mordant**, **a substance having an attraction for both the fiber and the dye**.

- To serve as a **mordant**, a substance must at least have an attraction for the coloring matter, so that it will combine with it to form a colored compound that is insoluble.
- Discoveries show that the Egyptians employed **mordants** in **dyeing** processes. For instance, red, yellow, and blue were three of the colors they used, and it is said that such **dyes** could not have been fixed without using **oxides of arsenic, iron, and tin as mordants**.
- Evidently, animal skins were first tanned and then **dyed**. Even recently in Syria, ram skins have been tanned in sumac and then the **dye** has been applied.
- After the **dye** dried, the skins were rubbed with oil and then polished. Shoes and other leather items used by the Bedouin have thus been **dyed** red and may well remind one of the ram skins dyed red used for the tabernacle.
- And ram skins **dyed** red, and sealskins, and acacia wood. (**Exodus 25:5**)
- Interesting in connection with **dyed** materials is a building inscription of Assyrian King Tiglath-pileser III. After telling of his military campaigns against Palestine and Syria, he states that he received tribute from a certain Hiram of Tyre and other rulers.
- The listed articles include **linen garments with multicolored trimmings, blue-dyed wool, purple-dyed wool, also lambs whose stretched hides were dyed purple. And wild birds whose spread-out wings were dyed blue.** [Ancient Near Eastern Texts, edited by J. Pritchard, 1974, pp. 282,283]

• Sources Of Dyes

- **Dyes** were acquired from various sources. In Palestine, yellow **dyes** were obtained from **almond leaves** and ground pomegranate rind, though the Phoenicians also used **turmeric and safflower**. The Hebrews could obtain **black dye** from the **bark of the pomegranate tree** and **red** from the roots of the **madder plant, *Rubia tinctorum***.
- **Indigo** plants, *Indigofera tinctoria*, that were probably brought into Palestine from Egypt or Syria could be used for **blue dye**. Part of one method used to impart **purple** hues to wool consisted of steeping

the wool in **grape juice** overnight and sprinkling powdered madder on it.

- **Coccus scarlet** and **crimson dyes** had as their source the oldest **dyestuff** known, a parasitic homopterous insect of the family Coccidae, *Coccus ilicis*.
- Because the living female, about the size of a cherry pit, resembles a berry, the Greeks applied to it their word *kok'kos*, meaning berry. The **Arab** name for the insect is *qirmiz* or *kermez*, from which the **English** word *crimson* is derived.
- This insect is found throughout the Middle East. Only its eggs contain the **purplish-red dyestuff**, rich in kermesic acid. Toward the end of April, the wingless female, filled with eggs, attaches herself by means of her proboscis to the twigs, and sometimes to the leaves, of the kermes oak, *Quercus coccifera*.
- The grubs, or kermes, are gathered and dried, and the valued **dye** is obtained by boiling them in water. This is the **red dye** that was used extensively for the appurtenances of the tabernacle and for the garments worn by Israel's High Priest.
- **Purple dye** was obtained from **shellfish or mollusks** such as the *Murex trunculus* and *Murex brandaris*. In the neck of these creatures there is a small gland containing but a single drop of fluid called the flower. Initially it has the appearance and consistency of cream, but upon exposure to air and light it gradually changes to a **deep violet or reddish purple**.
- These shellfish are found along the shores of the Mediterranean Sea, and the shades of color acquired from them vary according to their location. The larger specimens were broken open individually, and the precious fluid was carefully removed from them, whereas the smaller ones were crushed in mortars.
- Since the amount of fluid acquired from each shellfish was quite small, accumulating a considerable amount was a costly process. Hence, this **dye was expensive**, and garments **dyed purple became the mark of wealthy persons or those in high station**.
- As for Mordecai, he went forth from before the king in royal apparel of blue and linen, with a great crown of gold, and a fine-fabric cloak, even of **wool dyed reddish purple**. And the city of

Shushan itself cried out shrilly and was joyful. ([Esther 8:15](#))

- But a certain man was rich, and he used to deck himself with **purple** and linen, enjoying himself from day to day with magnificence. ([Luke 16:19](#))
- Another shellfish, the cerulean mussel, has been suggested as the source of a **blue dye**.
- Ancient Tyre became famous for a **purple** or **deep-crimson dye** known as Tyrian or Imperial purple. Though the Tyrians are said to have employed a method of **double-dyeing**, the exact formula used to obtain this color is unknown.
- The coloring matter was evidently obtained from the *Murex* and *Purpura* mollusks, piles of emptied shells of the *Murex trunculus* having been found along the shore of Tyre and in the vicinity of Sidon.
- The Phoenician city of Tyre is depicted by Yehowah as having **wool dyed reddish purple** and other colorful materials, as well as carrying on trading in such articles.
- And as for you, O son of man, raise up concerning Tyre a dirge. ([Ezekiel 27:2](#))
- Linen in various **colors** from Egypt your cloth expanse happened to be, in order for it to serve as your sail. **Blue thread** and **wool dyed reddish purple** from the islands of Elishah are what your deck covering proved to be. ([Ezekiel 27:7](#))
- They were your traders in gorgeous garments, in wraps of blue material and material of various colors and in carpets of two-colored stuff, in ropes twined and solidly made, in your trading center. ([Ezekiel 27:24](#))

See Also COLORS