

# Cochineal: The Insect that Dyes our World Red

Teresa Cabellos, Online Guild



Harvesting cochineal  
José Antonio Alzate y Ramírez, Memoria sobre la naturaleza, cultivo y beneficio de la grana (Report on the nature, cultivation and benefit of the cochineal) (1777), published in the Gazeta de Literatura, 12 May 1794  
<https://collections.nlm.nih.gov/catalog/nlm:nlmuid-2172035R-bk> [in the public domain]

In medieval and Renaissance Europe, dyers' guilds guarded their secret dye recipes closely. Using roots, leaves, barks, insects and even snails, dyers were able to create beautiful yellows, greens, blues and royal purple. However, achieving truly vibrant reds of good durability remained elusive, therefore the colour red became a symbol of wealth and status.

The Spanish conquistadors arriving in Mexico and Peru in the early 1500s were struck by the stunning scarlet reds that were being used to dye the beautiful textiles that could be seen in the streets and markets of Tenochtitlan, modern-day Mexico City. In 1520, Hernán Cortés described the incredibly saturated red pigment that was used to dye the mundane as well as the sacred – cloths, baskets and even the houses were coloured red.

The dye being used was obtained by pulverising the dried body of the cochineal insect, *Dactylopius coccus*, which produces carminic acid as a defence mechanism against predators. The cochineal insects were feeding on the local nopal (prickly pear) cacti. In Nahuatl (an Uto-Aztecan language that was used by the Aztec and Toltec civilisations of Mexico and is still used to this day) the dye is called *nocheztlī*, meaning 'blood of the prickly-pear cactus'.

In the centuries that followed, cochineal became one of the main exports of the New World. Its trade was monopolised by Spain for many years, contributing to making it one of the most powerful countries in Europe.

Cochineal soon became an extremely valuable product, used to dye the robes of kings, nobility and cardinals in Rome. It was also used by artists, who combined pulverised cochineal with a binder to create a vibrant pigment known as cochineal lake. The canvases of the most famous painters of Europe, including Titian, Tintoretto, Rembrandt and Van Dyck came to life with the use of cochineal containing pigments that revealed and enhanced the opulence of their sitters. However, cochineal began to lose its global relevance with the invention of cheap, mass-produced synthetic dyes in the mid-nineteenth century.

Recently, with the increased interest in more sustainable and eco-friendly sourcing of dyestuffs, the use of cochineal is flourishing. It is valued by textile artisans not only because of the vibrant and durable reds that can be achieved with it but also as an alternative to synthetic dyes.

Historically the Canary Islands have been significant producers of cochineal. By 1875, 2,722 tonnes a year were being cultivated, making the islands for a short period the largest producer in the world.

For the last 15 years Lorenzo Perez and his company Canaturex have been regenerating the agriculture of cochineal through the breeding and collection of the cochineal beetle on the idyllic island of Gran Canaria. Lorenzo aims to highlight and preserve an agricultural sector that was facing the imminent threat of disappearance from the Canary archipelago and to rescue a historic crop deeply rooted in the culture of the Canary Islands.

Lorenzo represents the fourth generation of a family of cochineal harvesters. The creation of Canaturex was the result of observing and studying the alarming decrease in the number of active cochineal harvesters in the islands, which was



Top L-R: Cochineal, Cochineal under the microscope  
Photos: Teresa Cabellos  
Bottom L-R: Lorenzo Pérez sorting out cochineal, Lorenzo Pérez cultivating cochineal  
Photos: Lorenzo Pérez

bringing the sector to the brink of extinction. Lorenzo and his team aim to revitalise the ancestral art of cochineal harvesting and to disseminate the traditional production techniques of dyeing raw materials with cochineal. These skills have been inherited and passed down from generation to generation since the nineteenth century.

Remaining faithful to ancestral production techniques, a traditional tool called a *milana* is used to collect only the adult female cochineal insects from the cacti and to deposit them in a tin container. Once the insects are collected, a thorough cleaning process is carried out to eliminate any impurities accumulated during harvesting. The cochineal insects are then dried in the sun. Once dehydrated, they are packaged in cotton or jute bags.

To successfully produce high quality cochineal, the farmers must take care of the insects as well as the cacti plants: pruning, watering, fertilising and caring for the soil. To obtain high quality cochineal, the insects need to be well cared for and pampered.

Cochineal dye from the Canary Islands is, at the moment, the only natural dye with a protected designation of origin (PDO) certificate from the European Union.<sup>1</sup>

## Bicentennial exhibition and book

In November 2024, two centuries of cochineal cultivation in the Canary Islands will be celebrated. This promises to be an historic event involving the participation of the Royal Tapestry Factory of Spain, the Prado Museum in Madrid, Spain's Museo del Traje (Museum of Costume), the National Gallery in London, the Van Gogh Museum in the Netherlands and the Mobilier National in France. Information on the use of cochineal pigments in the major works exhibited in their respective galleries will be available in an application that will accompany the Bicentennial Travelling Exhibition.

Cochineal remains relevant thanks to those who use it, and that is why Lorenzo would like everyone to be able to participate in this historic celebration. With this in mind, a special book is being developed to which dyers from around the world can contribute a small piece of textile, watercolour or paper dyed with cochineal, of 4x4cm in length and width. Each contribution will include the author's information and a short phrase describing what inspired their sample<sup>2</sup>. This bicentennial book aims to be a unique piece of history that reflects the diversity and global reach of the cochineal community.



Cochineal-dyed yarn

Photo: Teresa Cabellos

**About the author:** Teresa works as a Forensic Scientist for the Spanish Ministry of Justice, but when someone asks her ‘what do you do?’ she loves to answer that she is a wool explorer! The main objective of her work is to help promote the use of 100% natural wool by:

1. Supporting local wool producers by writing patterns specifically adapted to locally created yarns.
2. Preserving wool traditions through the research of traditional wool related techniques.
3. Promoting indigenous breeds through the development of a long-term project that involves the creation of several blankets made from European native sheep breeds.

You can learn more about Teresa at <https://teresalalana.com> or on Instagram @teresalalana

#### Footnotes

- 1 The PDO certificate is a guarantee of quality trade. Products with a PDO certificate owe their quality to the geographical environment, including its natural and human factors, where they are produced, processed and prepared. For more information see: <https://tinyurl.com/EU-agriculture-quality-schemes>
- 2 You can send your sample to Canaturex, Lorenzo Pérez-C/San Esteban, 3. CP. 35018 Las Palmas de Gran Canaria, Spain.