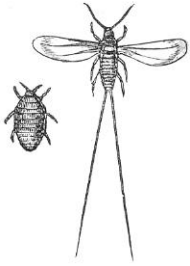


Mesa Prieta Petroglyph Project

Docent Resources

WELLS PETROGLYPH PRESERVE COCHINEAL ON MESA PRIETA

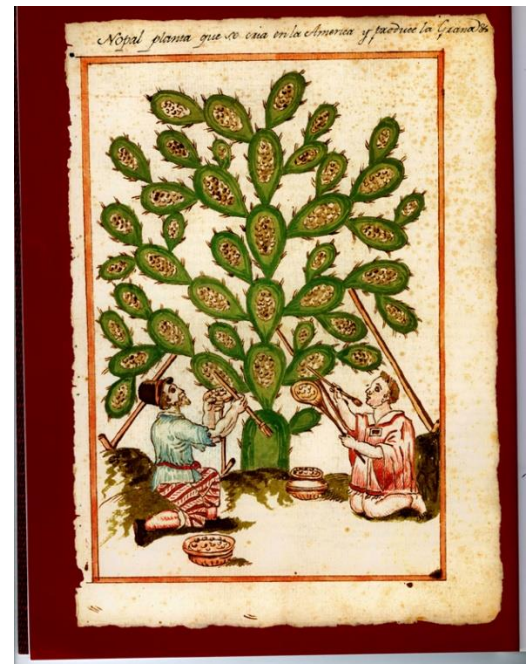


Text and images largely taken from Wikipedia (<https://en.wikipedia.org/wiki/Cochineal> and from *Cochineal Red: The Art history of a Color*, Elena Phipps, Metropolitan Museum of Art, New York, 2010.

The **cochineal** (*Dactylopius coccus*) is a scale insect from which the natural dye carmine is derived. A primarily sessile (does not have the ability to move around) parasite native to tropical and subtropical South America, Mexico, New Mexico and Arizona, this insect lives on cacti in the genus *Opuntia*, including prickly pear and cholla, feeding on plant moisture and nutrients.

The insect produces carminic acid that deters predation by other insects. Carminic acid, typically 17-24% of dried insects' weight, can be extracted from the body and eggs, then mixed with aluminum or calcium salts to make carmine dye, also known as cochineal. Today, carmine is primarily used as a colorant in food and in lipstick.

The carmine dye was used in Central America in the 15th century for coloring fabrics and became a hugely important export product during the colonial period, valued at more than all the gold taken from the New World. After synthetic pigments and dyes were invented in the late 19th century, natural-dye production gradually diminished. Health fears over artificial food additives, however, have renewed the popularity of cochineal dyes, and the increased demand has made cultivation of the insect profitable again, with Peru being the largest exporter.



1Harvesting cochineal from cactus in 1620 Mexico.
Newberry Library, Chicago



Some towns in the Mexican state of Oaxaca are still working in handmade textiles using farmed cochineal. The insects are housed in tiny woven baskets which allows farmers to move them to new plants as the older plants are sucked dry.

It is not known if the cochineal seen on Mesa Prieta is the same as Mexican cochineal. It can usually be found in the arroyo approach to the MPPP logo animal flute player in Tour 3, Flute Player Hollow. Look for the small fluffy white masses that protect the eggs and young insects on prickly pear pads. Squashing the insects produces the red dye.