

CHAPTER 2  
COCHINEAL IN PRE-COLUMBIAN MEXICAN  
AND PERUVIAN TEXTILES

There is a long and ancient history for early man's use of pigments in Mexico and Peru. Evidence of skill in using natural coloring substances can still be seen in the remaining paint adhering to the ancient ruins, in the beautifully colored codices, on multi-hued pottery, and in dyed textiles.

Prior to the Spanish conquest, the Aztec, Mixtec, and Zapotec people of Mexico and the Incas of Peru had developed sophisticated art forms including weaving on backstrap looms. Along with this production of textiles came the development and practice of staining and dyeing (Ciesla and Ciesla 1991, p. 18). Documents written by conquistadors and religious personages comment on the New World's natives' skill in the use of natural pigments. In a letter to Charles V of Spain, Cortez wrote, "They have colors for painting of as good quality as any in Spain, and of as pure shades as may be found anywhere" (Emmart 1986, p. 83).

Dyed Textiles in Mexico

The archaic cultures of Mexico flourished for several thousand years B.C. and people from these cultures wore dyed woven garments. Unlike the Peruvian textiles, no textile samples remain of the earliest occupants of Mexico or the Mayas. This is no doubt due to the warm, damp, tropical climate which destroys these fibers and to their practice of using funeral pyres. Most ancient Mesoamericans, including the Aztecs, burned their dead wrapped in a cloth and tied with cords called a "bundle." The Zapotecs and Mixtecs

practiced a secondary disposal where the dead were inhumed for usually four years (time for the deceased to complete the difficult and dangerous migration to the underworld). The skeleton was then exhumed, painted white and red, and interred in a magnificent tomb. Little is known about the dyed textiles of these early people, but it is known that cochineal was the most important dye used, and that the supply of this red dye came from the Oaxaca and the Chiapas areas (Westheim 1947, p. 2564).

### Dyed Textiles in Peru

The above condition is not the case in the arid parts of Peru, where climatic and soil conditions not only preserved the ancient textiles worn by archaic Peruvians, but also mummified their dead (Westheim 1948, p. 2564; Robinson 1969, p. 17). Radiocarbon dating has established that humans occupied the arid and sandy regions of the Pacific coast of Peru as early as 6,000 B.C., and settled in the Andean Highlands by 2,000 B.C. Gerber (1978, p. 24) and Robinson (1969, p. 18) have found archaeological evidence to suggest that these dates could be much earlier (see Table 1).

Occupants of arid regions of Peru were familiar with spinning agave fibers and cotton which they plaited and decorated with geometric patterns rubbed with dye powders. Weaving technology had developed by 2,000 B.C., and the presence of dyes has been detected in textiles dating from before the birth of Christ. The use of dyes increased with the domestication of the Cameloids (alpaca and llama). By the 300 B.C. (within the Paracas Necropolis), and with the use of Cameloid fibers, great strides were made in the application of dyes and dyeing techniques (Fester 1954, p. 238).

Along the arid coastal region of Peru, Pre-Inca civilizations were using dyes as early as 500 B.C. (Fester 1954, p. 238). Information derived from dye analysis on ancient Peruvian textiles reveal the presence of cochineal and indigo dyes and substantiate this use by the Pre-Incas (Kashiwagi 1976, p. 1235). Inca chroniclers, writing around 1530, gave information about dyeing and the collection of the cochineal-producing insect in Peru.

Table 1. Pre-Columbian Civilizations in Peru.

<b>DATE</b>	<b>PRE-COLUMBIAN CIVILIZATIONS IN PERU</b>
8000-2000 B.C.	Paleolithic sites discovered in Andes (Lauricocha, 13, 000 foot elevation at the head-waters of the Amazon River).
2000-1000 B.C.	First coastal cultures - pre-ceramic, antedating corn cultivation (Huaca, Prieta, Rio Seco, Asia, Alsas).
1000 B.C.- A.D.	In the Andes, Chavin Huántar; on the southern coast, Paracas; the central coast, Anco'n (ancient); the northern coast, Cupisnique and Salinar.
First 1000 A.D.	Civilization of the Nochica on the northern coast; Nazca culture in the south (brilliant achievement in pottery and textiles). Tihuanaco culture on the shores of Lake Titicaca, whose influence was felt on the central and southern coast.
1200 A.D.	Rise of the Inca civilization in the Andes (Cuzco Valley) founded by the Inca Manco capac.
1300-1400 A.D.	Succession of Incas, who conquered neighboring war like tribes and extended their territory.
1438-1525 A.D.	Pachacuti (1438-1471), Yupanqui (1471-1493), Huayna Capac (1493-1525). Three powerful Incas greatly expanded the empire by military conquest. By 1525, it reached to the Rio Maule (Chile) in the south and beyond Quito (Ecuador) in the north.
1525-1533 A.D.	Huayna Capac left his empire to his two sons, Huascar and Atahuallpa, the former to reign Cuzco, the latter at Quito. A struggle soon developed between the two brothers, which weakened the country. It was at this point (1532) that Pizarro and his band of soldiers landed in Peru.

Source: Harcourt 1960, p. 2.

Domestication of the cochineal-producing insect in Peru has not been proven but is suspected because of the reference by these chroniclers to the size of the insect, which was reported to be the size of a bean. The wild species of the insect is known to be one-half the size of the domestic cochineal (Fester 1954, p. 241).

#### Early Use of Cochineal in Mexico

The Aztec, Zapotec, and Mixtec all used cochineal. It is also known to have been used by the earlier inhabitants of Mexico. Alexander von Humboldt wrote at the start of the last century that the cultivation and use of cochineal probably goes back to the Toltec Era in the Tenth Century (Wright 1963, p. 635). So important was the red dye cochineal to the Aztec nation that it was part of a tribute consisting of cochineal, indigo, and finely woven textiles that was paid to Montezuma by neighboring subservient tribes from the Oaxaca highlands (Emmart 1986 p. 83; Ross 1986, p. 69). Surviving codices of Montezuma II stated that he had collected at least eighty-five sacks of cochineal from conquered peoples. The annual tribute rate due Montezuma II between 1480 and 1520 was set at twenty sacks (Born 1938, p. 222; Lee 1948, p. 452).

#### Cochineal and Pre-Columbian Trade

Cochineal was widely traded by Aztec traders, who regularly carried the red dye long distances to the southern limits of Mexico and even beyond to neighboring Guatemala. The red dye is even known to have been traded in the hostile regions of Tabasco, Mexico (Lee 1948, p. 453). In these exchanges, items such as obsidian spear-points, cochineal, red ochre, rabbit-skin cloaks, and bells were bartered for quetzal plumes, jaguar and other skins, and amber (Thompson 1940, p. 128). The merchants from the Tlaxcaltecan region of central Mexico considered cochineal a valuable product for interregional markets, and traveled long distances to trade the dye. After an extended journey, traders were known to

plan to return home on the lucky day, the day of "the washing of feet," which was held to celebrate the conclusion of a long trip. Trade goods were also exchanged at many specialized local markets, which were held every five days. Here cochineal was commonly sold along with other trade items. In this manner, through an elaborate system of production, exchange, and tribute, the red dye cochineal was distributed to the people of Mexico and other neighboring countries (Thompson 1940, p. 129).

### The Florentine Codex

References to the Aztec application of dye, and in particular to the use of the insect dye cochineal, can be found in a passage taken from the English translation of the sixteenth-century Florentine Codex by Fray Bernardino de Sahagun. This document gives invaluable insight into the use of cochineal before the arrival of the Spanish, and tells of cochineal being used as a dyeing agent, as a paint, as a cosmetic to beautify the face, as a stain for teeth, as a medicine, and as a significant trade item (Lee 1948, p. 453). Some of the passages from the Florentine Codex, which pertain to cochineal, are given in their entirety for I found no better means to convey the knowledge they contain.

The Aztec Nahuatal name for cochineal was "Nochezli." A passage, taken from the Florentine Codex, Book 11- Earthly Things, not only gives a full understanding of the Aztec name, but tells about the source of the dye and how it was used:

Its name comes from nochtle [opuntia] and extli [blood], because it is formed on the nopal and is like blood, like a blood blister. This cochineal is an insect; it is a worm. The cochineal nopal is the breeding place of this cochineal. It lives, it hatches on the nopal like a little fly, a little insect. Then it grows; then it develops; then it increases in size. It fattens, it increases much in size, it thickens, it becomes round. Then it envelops itself in fat. When the worms are distended, they come to rest just like blood blisters. Then they cover themselves with a web. Then they die; they fall; also they are heaped together, swept up. With a broom they are heaped together.

This color is not yet refined. It is of quite dark surface, still like dried blood - round, small and round, a little spongy, a little dry. It is a coloring medium, a chili-red coloring medium, a chili-red colorer.

I dye. I make something cochineal-colored. I apply cochineal. I paint things with colors. I apply colors. I blend colors. I thicken colors. I make something chile-red. I become chile-red. I bring out the color. (Dibble and Anderson 1963, p. 239)

Other names given to cochineal can be found in the same Florentine Codex. The name and description are given below:

Tlaquauac Tlapalli - Its name comes from tlaquauac [dry] and tlapalli [color], because it is very good, firm, vivid - a vivid color; a real chili-red, very much like blood, like fresh blood.

Tortilla-Like Cake - And this is the same kind of cochineal. Its name is nocheztaxcalli.

I make tortillas of cochineal. I beat out tortillas of cochineal. I form cochineal into tortillas.

Tlapalnextli - Its name is from tlapalli [color] and nextli [ashes], because this same cochineal is a preparation, just a mixture. Some has chalk, some has flour, some is a mixture [of both].

The inferior cochineal, which comes from a tuna, an edible nopal, is also named tlapalnextli. Its cochineal, of a kind of fruit-producing nopal, is made into cakes".

It is named tlapalnextli because it is uncolored; it is not like blood, but is ash colored, ashen, chalky.

I apply tlapalnextli to something. I apply color to something. I blend something. I shade something. (Dibble and Anderson 1963, p. 239-240)

And from Florentine Codex, Book 10 - The People, fifteenth chapter, comes a description of a harlot's use of cochineal:

She lives like a bathed slave, acts like a sacrificial victim; she goes about with her head high - rude, drunk, shameless - eating mushrooms. She paints her face, variously paints her face; her face is covered with rouge, her cheeks are colored, her teeth are darkened - rubbed with cochineal. [Half] of her hair falls loose, half is wound about her head. She arranges her hair like horns. (Dibble and Anderson 1961, p. 55)

And from the same Book 10, twenty-first chapter, comes a description of a seller of cochineal:

The displayer of wares on a large basket is a seller of colors, of various colors, of dyes; a man who piles [small baskets of color] on a large basket. He sells dried pigment, bars of cochineal pigment, cochineal mixed with chalk or flour, [pure] cochineal light yellow, sky blue pigment: chalk, lampblack, dark blue pigment. (Dibble and Anderson 1961, p. 77)

Reference to coloring of teeth with cochineal can be found in the Florentine Codex, Book 8 - Kings and Lords, eighth and tenth chapters:

The teeth were stained with cochineal: the hands and neck were painted with designs - the necks were covered [with painting]. The stomach and breasts were [also] painted with designs. And some will place - will put - the dissolved medicine on the teeth: with this medicine the teeth are rubbed: with it the mouth is washed: and the teeth are to be darkened with chili, with salt, with cochineal (Dibble and Anderson, 1954, p. 48)

The Florentine Codex, Book 9 - The Merchants, third, fourth, and fifth chapters, speaks of purchases, offerings, and traveling items:

The trifling purchases are exhibited - the little obsidian knives with leather handles, the little shells, the little needles, the trifling cochineal, the alum.

And these were what the princesses required: golden bowls for spindles, and ear plugs of gold and of rock crystal. But those who were only commoners required obsidian ear plugs, copper ear plugs, and razors of obsidian with leather handles, and pointed obsidian blades, and shells, and needles; [and] cochineal, alum, rabbit fur, birthwort, [and] cosmos sulphureus.

These disguised merchants were the first who secured all the things mentioned which occurred there. And for it they took along obsidian blades with leather handles, obsidian points, needles, shells, cochineal, alum, red ochre, [and] strands of rabbit fur not yet spun into thread. (Dibble and Anderson 1959, p. 12, 18, 21, 22)

### The Zapotec and Cochineal

#### The Zapotec Cochineal God Coqueelaa

So important was cochineal to the Zapotec culture that they had a deity in their pantheon of gods of agriculture and sustenance called Coqueelaa, the god of the cochineal harvest. The Zapotec, after planting the nopal cactus, or on gathering the cochineal, would sacrifice a white native hen to the god Coqueelaa. The Zapotec belief was that this god watches over the cochineal (Whitecotton 1977, p. 164).

#### Sierra Chontal Ritual

A Pre-Columbian Sierra Chontal ritual from San Matías Petacaltepec, Oaxaca, written in a small blue "cuaderno" housed in the National Museum of Anthropology and

History in Mexico City gives insight into the importance the Zapotecs placed on the growing of cochineal and the interrelationship between agriculture and religion. This mystical cochineal prayer was taken from one of the six books or "cuadernos" and is now considered to be sacred, ancient, and occult. The English translation was interpretive rather than literal, while it still retained the prayer-like metaphorical elements which characterized it as an oracle (Bufis 1971, p 16; see Appendix I).

The prayer was recited during a ritual using copal and other offerings to propitiate numerous naturalistic gods. A man must "ayunar" or fast in preparation for speaking with the gods. A fast was for three, nine, or forty days, and depended on the reason for supplicating the gods. Each day of the fast a man would abstain from food for twenty-four hours, speak with the gods, and then eat. This procedure was continued for the duration of the fast (Bufis 1991, p. 17). After preparing for supplicating the gods by fasting, a "pustura" or square was made on the ground. Often this was done inside the propitiator's house. Candles were placed at the four corners to represent the four cardinal directions. As the prayer was being said the candles are lit, first in the east, then west, then south, and last north. The east represents the rising sun and the west the setting sun. Three turkey eggs or a plate of turkey blood was placed in the center of the square as an offering to the gods. Throughout the ritual various nature deities were called upon in supplication, with each deity receiving an offering of copal (hard resin obtained from several tropical trees). Copal is referred to in the description of the ritual as the price to be paid (Bufis 1971, p. 17).

The number of pieces of copal to be offered had meaning. Nine, five, six, and three represented good spirits, while seven, twenty-seven, fourteen, and thirty-seven depicted bad spirits. One negative spirit was the spirit of the insect that destroyed the nopal. One good insect spirit was the spirit of the cochineal insect. The offerings to the



spirit of the good mother and father cochineal insect were in three groups of nine, and recorded as 39 (Bufis 1971, p. 17).

As the ritual proceeded various gods were mentioned along with their appropriate offerings. Groups of copal were arranged one by one in the "pustura" or square. The petitioner was in communication with the gods and spoke of his offering of copal as the flower of smoke or the flower of gum, etc. (Bufis, 1971, p. 17). The ritual concluded by burning all the ceremonial elements within the square. The offering was thus made to the gods and the "garza," "heron," or bird, as the ritual was called, was over (Bufis 1971, p. 16–32).

The length of the fast and ritual attested to the importance the Zapotecs placed on the success of the cochineal harvest. This ancient prayer and the sixteenth-century Florentine Codex make it clear that the use of cochineal by the Aztec, Mixtec, and Zapotec was well integrated into their everyday lives and culture in Pre-Columbian times.

Not all is known about the people who lived before the arrival of Cortez, but from what is known, it is easy to discern that dyeing and painting with the red dye cochineal were a long-standing practice with the indigenous peoples of Mexico and Peru, and that this red dye was widely used, traded, and valued. As dye analysis continues to be performed on the textile remains of the people of the more arid regions of South America, it is hoped that a fuller understanding of the origin and use of cochineal can be gained.