

# The White Plague of Opuntia

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What is that white stuff all over my prickly pear? It looks like a public bathroom for the bird population of my neighborhood. We can't blame the birds for this mess. It is caused by the cochineal scale insect (*Dactylopius coccus*). This bug loves to latch and hatch on the opuntia species, both the prickly pears and the chollas.

The female has an 1/8-inch long body. She prefers to be near an areole where there is protection from predators afforded by those nasty spines and glochids. She and her babies are sheltered under a white waxy substance that looks like bird droppings or cotton. The plant provides their source of nourishment. The scale insects will probe into the plants for their food. The give-away is the presence of a dark red substance that can be seen if you remove the white residue.

It started a very large industry for the Mexican people from about 1500 until this past century. The arrival of the Spanish, ostensibly in search of gold, found another source of wealth...the beautiful red dye of the cochineal insect. The trade in red dye exported to most of the European cultures during this period reached enormous proportions displacing the previously preferred red dye from another scale insect the *Kermes vermilio*, growing on the Mediterranean oak. The market for dye stuff for fabrics in Europe at that time was very lucrative. Sometimes the fabrics sold had more money invested in the dye than in the fabric itself. Big sources of customers were the British (red coats), Canadian Mounted Police, the Vatican cardinals, and most royal houses. Almost all of the elite wanted this beautiful color of red.

The process of producing the product was very labor intensive: first tending the opuntia plants, infesting them with the scale insect. Then the harvest which was done about three times per year. It takes 70,000 female scale bodies to make a pound of dye. The product was dried to produce bricks of dye that were then transported to Europe. Eventually, the plants and scale parasites were grown elsewhere which weakened the Spanish monopoly on this product. Now with the advent of cheaper aniline dyes, cochineal is no longer in great demand. However, there may be a comeback in the future. The dye also has some insecticidal properties, and has found new uses as a coloring for food products and cosmetics. Are you turned off by an insect providing the scrumptious color of your hot dogs, jams, fruit juice or lipstick?

The scale insect is easy to remove if you use a hard/fast spray of water to wash them off. They will probably return so vigilance is the word. They can also be controlled by application of soap solution, alcohol (save the gin and vodka for yourselves) use methyl (rubbing) instead. The male is a very small winged creature and seldom seen. The baby scales are airborne to nearby plants. Birds settling on the plant and transporting the infection to other target plants on their feet can also spread the infestation. Of course, insecticides work well but I prefer the water method. No environmental damage and

quite good results if you are watchful and prepared to wash your plants off more than once. Keep an eye on your precious opuntias they richly deserve your attention.