

producing more than 1000 young, which soon spread themselves over the plants. The males are very few—not more than 1 to 100 or 200 females—and are of no value as a dye. The first crop of females is picked off about the middle of December, and until May successive generations are gathered from time to time. The females, full of young, lose about two-thirds of their weight in drying. The process of gathering the insects is extremely tedious, a day's picking amounting only to about two ounces of cochineal. The killing is done in three ways: (1) by placing on a hot iron; (2) by placing in a hot oven; and (3) by dipping in a basket into boiling water, which is considered the best method. When killed and dried, they may be kept for any length of time without injury. The name "cochineal" is limited to that species first cultivated in Mexico, but long transplanted successfully to the Canary Islands, Java, and other warm parts of the Old World. Other species were known to the ancient Hebrews and Egyptians and were largely cultivated on a species of oak. Among the Arabs this insect is known as *kermes*, "red dye," and it is largely cultivated in Algeria (*Knowledge*, London, 1901). Cochineal was formerly much used for coloring wool or silk a scarlet or crimson; but, owing to the cost of its production and to the fact that the colors, although brilliant, are not very enduring, this dye has been greatly replaced by cheaper coal-tar products; and for this reason the cochineal industry has been rapidly declining. See CARMINE.

COCHINEAL, kōch'ī-nēl (from Sp. *cochinilla*, cochineal, wood louse, from Lat. *coccineus*, scarlet, from *coccum*, berry, or from Sp. *cochina*, sow; so called either from the color, or, if the second derivation be preferred, from the shape). A scale insect used as a dyestuff for scarlet and crimson and in the preparation of carmine and lakes. Cochineal consists of the bodies of the females of a coccid (see COCCIDÆ) called *Coccus cacti*, because it feeds upon plants of the cactus family, particularly on one known in Mexico as the nopal (*Opuntia cochinillifera*), nearly allied to the prickly pear. (See CACTUS.) These insects are minute, 70,000, it is said, being required to weigh a pound in a dried state—when not adulterated by red lead or other heavy dust. The male is of a deep-red color and has white wings. The female, which is wingless, is deep brown, covered with a white powder; flat beneath, convex above. Branches of nopal covered with insects are cut off before the rainy season sets in and carefully sheltered in a covered building. From these supplies the plantations are stocked at the close of the wet season, about the middle of October. When warmed by the sun, the females soon begin to lay eggs, each female