Botanical Briefs: Prickly Pear Cactus—*Opuntia* Miller

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Clinical Importance

Many cacti are capable of inflicting mechanical injury by large (spines) or small (glochids) emergences. Generally, the amount of damage to the skin is inversely proportional to the size of the emergence.

Cutaneous Manifestations

Occupational dermatitis affects workers who gather the fruit and burglars who stumble into hedges of *Opuntia* species, especially *Opuntia ficus-indica* (the Indian or Barbary Fig Cactus). The skin reaction has been called *sabra dermatitis* and presents as a pruritic papular eruption that initially affects the finger webs, but it may affect any area and resembles scabies or fiberglass dermatitis. The face, buccal mucosa, hard palate, tongue, and gastric mucosa have occasionally been affected in those who try to suck out the glochids or inadvertently get them in their mouths while eating the fruit.

The glochids may be transferred from workers' clothing to others. The prickly pear should be picked only when wetted, and picking should be stopped when it is windy because the glochids can become airborne. The effects of the glochids on the skin have been reproduced in the laboratory, and patch tests have shown that allergy is not involved.[1]

Family

The Cactaceae family contains about 2000 species. They may easily be confused with certain cactiform species in the family Didiereaceae and, more importantly, with some *Euphorbia* L. species in the family Euphorbiaceae. Members of the *Euphorbia* species differ from cacti in the absence of areoles at the spine bases and the presence of white milky latex that is often a potent cutaneous irritant.

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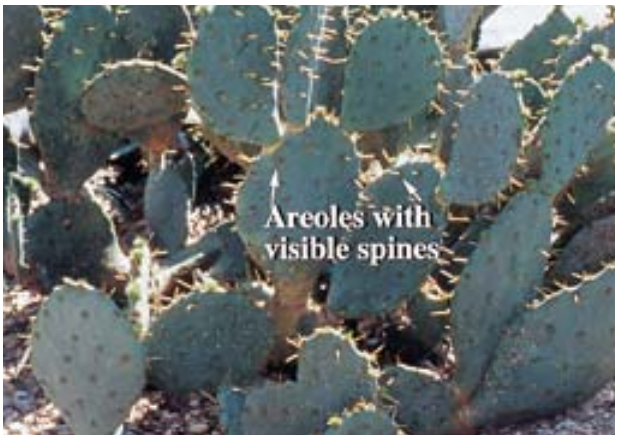

Figure 1. *Opuntia* Miller (species unknown) demonstrating flattened, beaver-tail–like stems. Note spines on areoles. (Photograph courtesy of COL Dirk M. Elston, MC, USA, San Antonio, Texas.)

Distribution of the Plant

There are approximately 250 species of *Opuntia*, all native to the western hemisphere, ranging from New England and British Columbia southward to the Strait of Magellan. Many species were introduced into the eastern hemisphere in early post-Columbian times and have become established as notable weeds, particularly in the Mediterranean region, South Africa, South Asia, and Australia.

Identifying Features/Plant Facts

As with most cacti, opuntias have succulent stems, with the leaves reduced to mere spines. Low-growing opuntias with notably flattened stems are called *prickly pears* or *beaver-tail cacti*. These species are the most widespread (Figure 1). Some opuntias are tree-like, and a few shrubby species have jointed stems that are almost cylindrical. The spines arise in clusters, and at the base of each cluster are short stiff hairs (glochids) that are minutely barbed (Figure 2). These glochids make opuntias particularly troublesome for people who handle them.

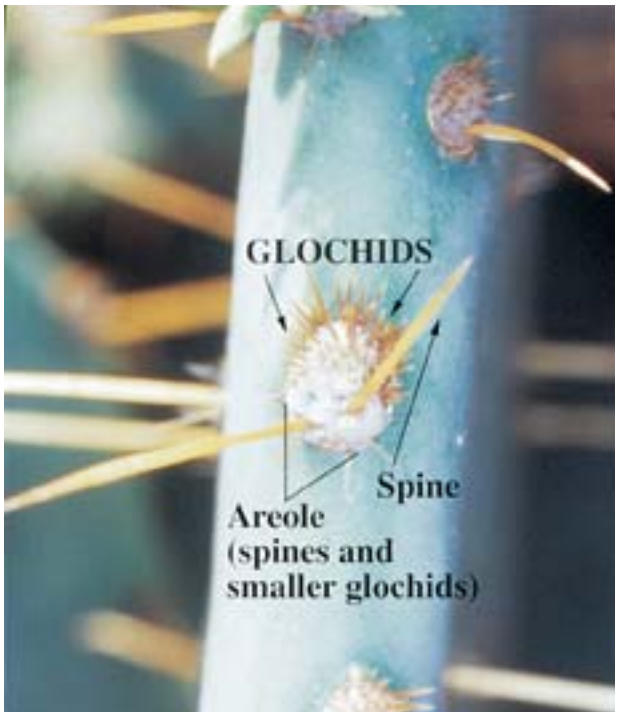

Figure 2. Side view of flattened *Opuntia* stem demonstrating areoles containing typical larger spines and smaller glochids. (Photograph courtesy of the Dallas Arboretum.)

Figure 3. Fruit on a species of *Opuntia vulgaris* Miller. The spines have fallen off the areoles. (Photograph courtesy of COL Dirk M. Elston, MC, USA, San Antonio, Texas.)

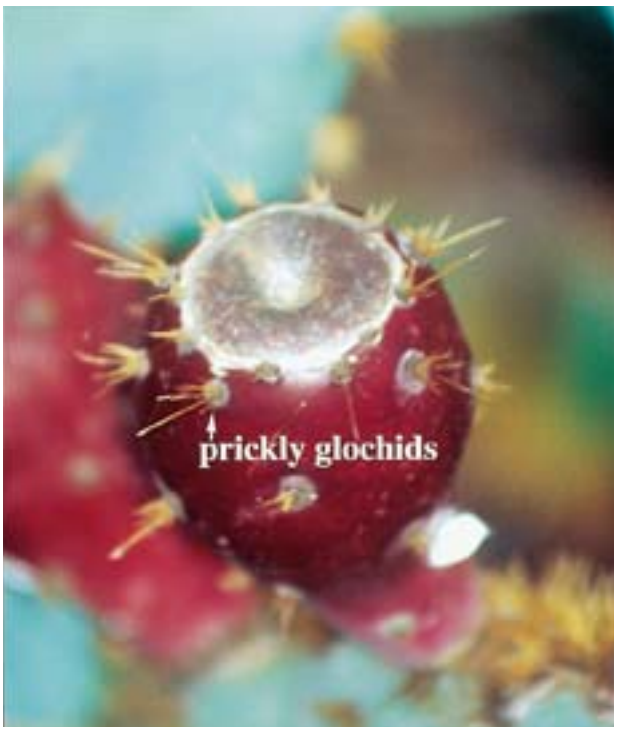

Figure 4. A prickly pear that has maintained its glochids. (Photograph courtesy of COL Dirk M. Elston, MC, USA, San Antonio, Texas.)

The fruits of certain *Opuntia* species, including *Opuntia vulgaris* Miller and *Opuntia ficus-indica* Miller, are edible (Figures 3 and 4). They are known as prickly pears and Indian figs, respectively, although the former name is often used loosely in place of the latter. In Africa, the plants are placed outside houses as burglar alarms.

Sabra is the Hebrew name for the edible prickly pear, but the word *sabra* also is used to refer to natives of Israel who regard themselves as prickly and rough on the outside but soft and sweet on the inside.

Dermatitis-Inducing Plant Parts

The glochids (tufts of hundreds of short, barbed, or hooked hairs) arise from pin-cushion–like structures named areoles from which the larger spines, if present, also arise (Figures 2 and 4). The fruit contains the highest concentration of glochids.[2] The minute barbed glochids often point outward and backward like a fishhook, and they produce considerable irritation and pruritus after penetrating the skin.

Nomenclature

The genus name *Opuntia* was used in antiquity by the Roman writer Pliny and others, but there is uncertainty as to which plant *Opuntia* referred. The modern use of the name as a cactus began with Philip Miller, an English gardener and writer, who formalized the names of many common plants in the mid 18th century. One common species of prickly pear

cactus, *Opuntia ficus-indica* Miller, has several colloquial names, including *Indian Fig Cactus, Common Sabra, and Yellow Sabra*.

Treatment

Many intriguing methods of removing imbedded glochids from the skin have been recommended. Warm wax, glue, sticking plaster, or cellophane tape have been applied to the affected area. After application, the glochids are quickly ripped off.[3] Facial gels and masks have been used similarly. In perhaps the only controlled study, glochids of *Opuntia ficus-indica* were effectively removed from rabbits by first removing the larger clumps with forceps and then applying glue to the affected area, followed by gauze. After the glue dried, the gauze was grasped and peeled off. This resulted in removal of 95% of implanted glochids.[4]

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