

back from the Southwest by W. H. Emory. They can never be critically identified, but are probably of this relationship.

*Illustrations:* Engler and Prantl, *Pflanzenfam.* 3<sup>6a</sup>: f. 57, C; Förster, *Handb. Cact. ed.* 2. f. 141; *Illustr. Fl.* 2: f. 2530; ed. 2. 2: f. 2989; *Pac. R. Rep.* 4: pl. 9, f. 1 to 5; pl. 22, f. 12 to 15; *Wiener Illustr. Gartenz.* 10: f. 115, all as *Opuntia camanricha*; *N. Mex. Agr. Exp. Sta. Bull.* 78: pl. [7], as *Opuntia chihuahuensis*; *Contr. U. S. Nat. Herb.* 12: pl. 55, as *Opuntia blakeana*; *Cact. Mex. Bound.* pl. 75, f. 9 to 13.

Plate xxv, figure 2, represents a flowering joint of a plant sent from Tucson, Arizona, in 1916, by Dr. MacDougal.

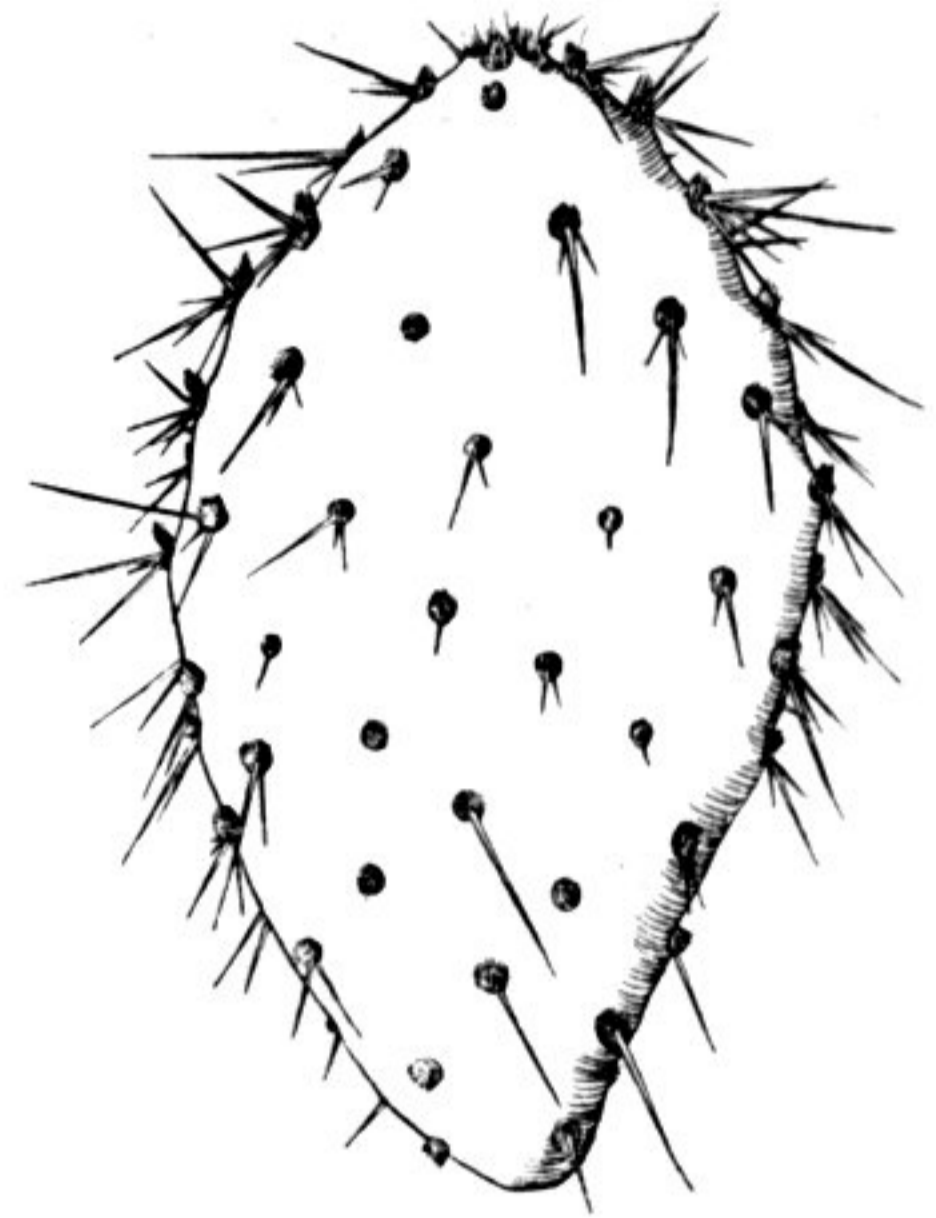


FIG. 183.—*Opuntia covillei*. X0.4.

➤ 146. *Opuntia mojavensis* Engelm., *Proc. Amer. Acad.* 3: 293. 1856.

Prostrate, with suborbicular joints; pulvini remote, with large yellow bristles; spines 2 to 6, stout and annulate, acutely angular and compressed, more or less curved, reddish brown, paler toward tip, 2.5 to 6 cm. long, 1 to 3 smaller, slenderer, pale ones added below; fruit oblong, 4.5 cm. long.

*Type locality:* On the Mojave, west of the Colorado, California.

*Distribution:* Known only from the type locality.

The fragmentary type specimen has been examined; we have been unable to refer any other specimens to this species, which is thus very imperfectly understood.

*Illustration:* *Pac. R. Rep.* 4: pl. 9, f. 6 to 8.

147. *Opuntia covillei* Britton and Rose, *Smiths. Misc. Coll.* 50: 532. 1908.

*Opuntia megacarpa* Griffiths, *Rep. Mo. Bot. Gard.* 20: 91. 1909.

*Opuntia rugosa* Griffiths, *Proc. Biol. Soc. Washington* 27: 27. 1914.

Bushy plants, usually growing in dense thickets; joints orbicular to obovate, 10 to 20 cm. long or more, pale green, sometimes purplish, slightly glaucous; areoles 2 to 4 cm. apart; spines several from an areole, slender, unequal, the longest ones 6 cm. long, white when young, brownish when old; flowers large, yellow.

*Type locality:* San Bernardino, California.

*Distribution:* Interior valleys of southern California.

*Opuntia covillei* and *O. vaseyi* grow in the same valleys, often in adjoining colonies, and while hybrids may occur, the two species could easily be distinguished.

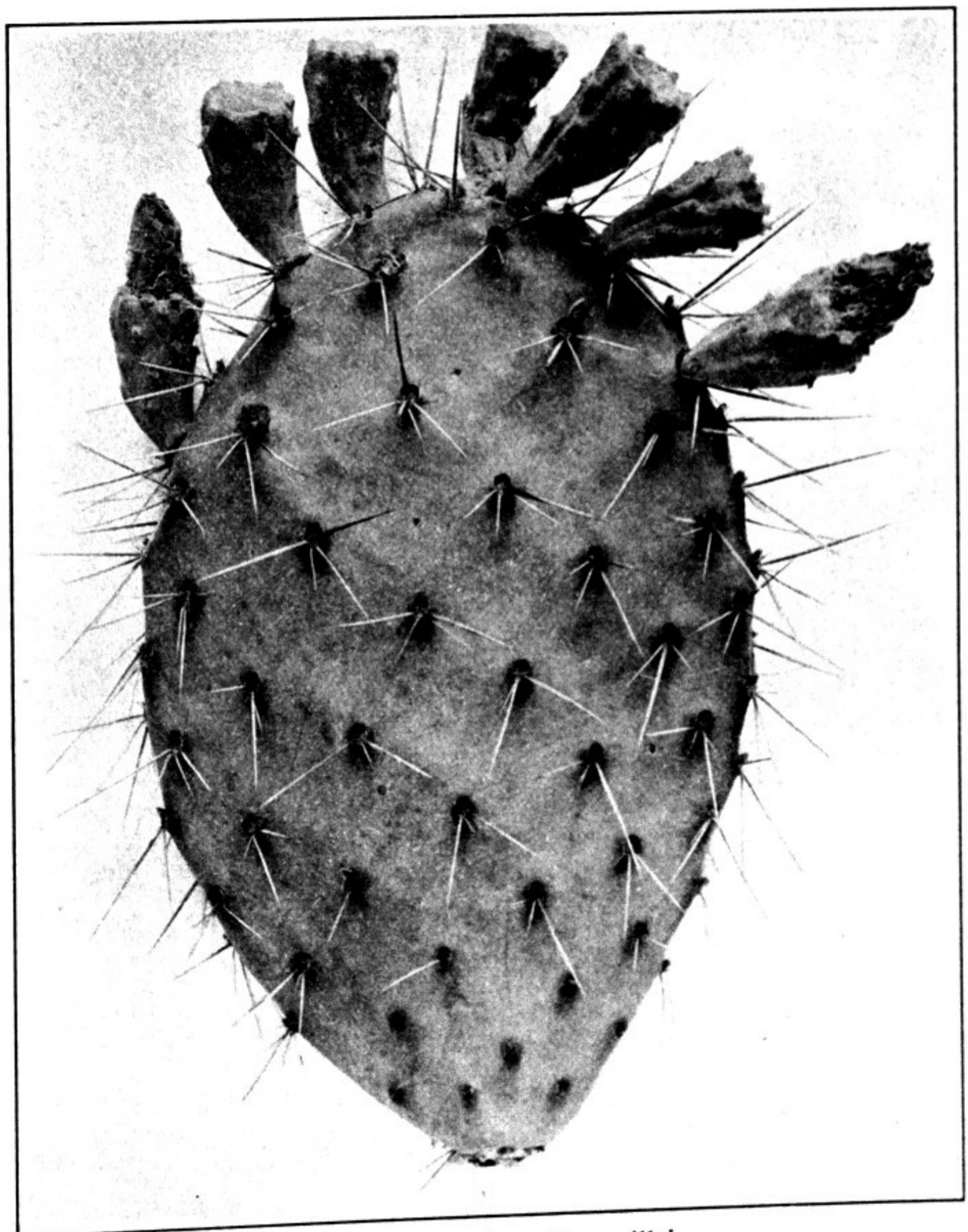


FIG. 184.—*Opuntia covillei*.