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✓ 247. *C. COCCINEUS*, *Engelm. l. c.*, sub Echinocereo. Higher mountains about Santa Fé; often in large clusters of 8 or 15 heads; flowering in May. — The areolæ are hardly oval, but almost orbicular, and are distinguished from those of most related species by their large size. — Among a number of plants of this family which Mr. Fendler sent from Santa Fé in a living state, but which unfortunately were all dead when they came to hand, are some specimens which appear to be varieties of this species, viz.: —  $\beta$ . MELANACANTHUS: aculeis radialibus 10–12 cinereis, centrali longissimo atrofusco porrecto recto seu leviter deorsum curvato. —  $\gamma$ . CYLINDRICUS: subsimplex, cylindricus; aculeis 8 radialibus, singulo robustiori porrecto.

✓ 248. *C. TRIGLOCHIDIATUS*, *Engelm. l. c.*, sub Echinocereo. Higher mountains about Santa Fé; also in gravelly soil on the lower hills; flowering in May and June. — To the description given in Wislizenus's Report I will add here, that the spines are often somewhat curved; the ridges are sharp, but the grooves between them very wide and shallow; the areolæ widely distant from one another (often over an inch and a quarter), and the expression "*areolis sparsis*," in the character, ought to be changed to *areolis distantibus*.

✓ 249. *C. FENDLERI* (sp. nov.): globoso-ovatus, simplex vel e basi proliferus, cæspitosus; costis 9–10 obliquis tuberculatis interruptis; areolis orbiculatis approximatis; aculeis basi bulbosis robustis, radialibus sub-7 compressis subincurvis fuscis demum cinereis (tribus inferioribus longioribus, superioribus brevioribus, summo nullo); aculeo centrali robustiore longiore teretiusculo sursum curvato atro-fusco; floribus campanulatis; tubo pulvillis sub-30 albo-tomentosis stipato, inferioribus aculeos setaceos albos apice adustos 8–12 radiales et singulum centralem, superioribus aculeos sub-3 robustiores longiores curvatos albos gerentibus; sepalis interioribus 12–15 lineari-lanceolatis acutis; petalis oblongo-linearibus, acutis vel obtusis 16–24; stigmatibus 12–14 viridibus stamina numerosissima vix superantibus. —  $\beta$ . PAUPERCULUS: aculeis robustis abbreviatis, radialibus 5–7, centrali subnullo. — Santa Fé, on elevated sandy plains; flowering in June. — The specimens before me are  $2\frac{1}{2}$  inches high, and at the base of the same diameter: the areolæ from 4 to 6 lines distant; the lower radial spines 7 to 10, the upper from 3 or 4 to 6 lines long; central spine somewhat erect, curved upwards, 10 to 15 lines long. In var.  $\beta$ . the spines are all from 3 to 6 lines long. The upper spine is wanting in all my specimens, and the opposite lowest one is longer than any except the central spine. Flowers from  $2\frac{1}{2}$  to  $3\frac{1}{4}$  inches long and wide, violet-purple. The spines on the lower part of the tube are from  $2\frac{1}{2}$  to 3, and on the upper from 3 to 5 lines long. Petals variable in shape.

✓ 250. *OPUNTIA PHÆACANTHA* (sp. nov.): diffusa; articulis obovatis seu orbiculato-



obovatis compressis; areolis orbiculatis fusco-setosis margine inferiore aculeos robustos 1-5 rectos compressos inæquales fuscus apice pallidiores plerumque deflexos gerentibus rariusve nudis; ovario obconico areolis sub-30 tomento pallide fusco instructis, superioribus albo-setosis; sepalis interioribus sub-20 late obovatis retusis seu emarginatis; petalis 10-13 obovatis retusis seu emarginatis; stigmatibus 5-7 suberectis stamina vix superantibus; bacca obovato-pyriformi nuda. — On rocky hills about Santa Fé, and on the Rio Grande, very common; flowering in May and June. This appears to be the most northern form of the *Opuntia* with yellow or brown and flattened spines, which belong to the section of *O. Tuna*. Another species, with larger joints and larger fruit, occurs in Texas. — Some specimens before me are prostrate, with ascending branches; the joints 5 or 5½ inches long, and 3½ or 4 wide; areolæ an inch distant from each other, most of them bearing stout spines; the lower sometimes only one, the upper from two to five, but mostly three or four: one or two are directed upwards, the other and stouter ones more or less downward. Larger spines 1½ to 2 inches long, dark brown with lighter tips; the smaller from half an inch to one inch long, whitish. — Another specimen has larger, more orbiculate joints, from six to eight inches long, and five or six wide; the spines fewer, all directed downwards, or on many areolæ none at all. The flowers which have been distributed under this number are two or two and a half inches in diameter: ovary about one inch long: sepals yellow with red: petals yellow: stamens red or yellow: stigmas apparently green. The fruit which Mr. Fendler says belongs to this species is about half an inch long, red, smooth, apparently juicy when fresh; the seeds often three lines in diameter, margined like those of *O. vulgaris*. — Several other *Opuntia* with compressed joints, some of them with fleshy, others with dry and spiny fruit, some of them very spiny, and others almost destitute of spines, have been collected by Mr. Fendler about Santa Fé; but for want of more complete materials, a description is not here attempted.

✓ 251. *O. CLAVATA*, *Engelm. in Wislitz. Rep. not. 12.* Plains around Santa Fé; never found on the mountains; flowering in June. — I add to the description already published, that the areolæ are very large and closely approximate. From nine to eleven smaller and narrower spines are directed upwards or radiating; about six of them are turned downward, and are larger and longer; the former are from two to four, or even six or eight, lines long; the latter are from six to fourteen lines long. The joints form a large and spreading, level-topped mass, which attains the diameter of several feet.

✓ 252. *O. ARBORESCENS*, *Engelm. l. c. not. 5.* Hills and elevated plains, from Bent's Fort on the Arkansas to Santa Fe; flowering in June. — About five feet high, sometimes