

### Mexican Field-notes (3)

by Christian Brachet, Michel Lacoste & Felipe Otero

We continue here with our observations made within the boundaries of the state of Hidalgo.

**M. wiesingeri:** following carefully the indications contained in Boedeker's description of this species, we easily found a healthy population of this species above Metzquitlan (not to be confused with Metztitlan), near Tuzanapa, growing as it should under pine and/or oaks, amongst obsidian rocks (ML 23), by the side of MEX 105 to Tampico. This species has the characteristic of having its tubercles arranged in spirals numbering often (but not always) twice the Fibonacci numbers (i.e. 16;26). The flowers of the plants in the population we have observed are often paler than what the literature had led us to believe, a pale old silk pink, instead of carmine-red. Such colour is naturally in better agreement with the placement of this species within the *M. discolor* group.

**M. discolor:** we have observed this plant, growing under the shade of trees on the top of rocks in the El Chico area (ML 83). We have also found this species growing in the cliffs above San Alejo (Hidalgo), this form having been described by W. Reppenhagen as *M. discolor* var. *longispina* (ML 170). Ferocious looking, with long and thick spines, yes, but is this due to the growing conditions of the plant on this site, dry and with more sun than at El Chico? Plants observed near San Lorenzo Apam (ML 172), this time growing on flattish ground, were quite similar to the plants of San Alejo. We were searching for *M. apamensis*, but did not find any plant in satisfactory agreement with W. Reppenhagen's description.

**M. kewensis:** this species is the well known plant with six centrals and no radials found in the Canon of Tasquillo. More often than not, it grows on old walls and buildings rather than in natural ground, a fairly slim, tall plant, the largest plants having a diameter of 65-70mm and a height of 200-250mm (ML 61). We also found plants which we attribute to this species in Queretaro, on the side of the road from Cadereyta to Vizarron.

**M. obconella:** this characteristic plant, with its four long yellowish curved centrals, is widespread in the general area of the Barranca of Metztitlan, where it grows in a variety of different manners, in some places forming large dichotomously dividing plants, in some others the heads remaining single (ML 3-4). The length of the centrals is variable, as is the colour of the flowers, from orange-pink to carmine. To use (slightly out of context) words of D. Hunt, *Bradleya* 2:93(1984), in A new review of *Mammillaria* names, this population can be separated from *M. polythele* by the "lack of the usual purplish ingredient in the tubercle, spine and flower colour". *M. ingens* should probably be considered as an intermediate between *M. obconella* and *M. polythele*. Plants grown from seed collected on a plant in agreement with the description of *M. ingens* (ML 3) are not distinguishable for the time being from "true" *M. obconella*.

**M. mollendorffiana:** we found quite easily the site described by D. Hunt and C. Glass & R. Foster, and collected some seed (ML 22), which was distributed in 1989 by the Society. We also found a very variable population of plants at Puerto Juarez, 15km to the east of Santuario Mapethe, at an altitude of about 2400m: large cylindrical plants (ML 167), with 4-6 centrals

and 18-20 radials. This population may well be the hybrid swarm between *M. polythele* and *M. mollendorffiana* mentioned by D. Hunt in his *Observaciones sobre M. rhodantha y especies aliadas* (field-numbers DH 8537 A to D), *Cact.Suc.Mex.* 21 :33-35(1976).

**M. geminispina:** this well-known species is widespread over a large area including the Barranca of Metztlán. The oldest plants form big mounds, over a metro in diameter. In one stand, H is usual to observe plants with either short or long centrals. It mostly grows in the nearly vertical walls of the cliffs of the barranca, but is also regularly seen on the more or less steep slopes of debris at the foot of the cliffs. A few years ago, Felipe Otero found a very white short spined plant with small flowers, which may be attributable to this species in the barranca containing the Rio Amajac, or may also be related with *M. leucocentra*, but we have not found again this population.

**M. leucocentra:** we observed a fairly numerous population of this species in an area about 15km northwest of Zimapan, in the barrancas above the Arroyo Santiago El Mubi, near two mines called Purisma and Balcones (ML 62). This corresponds to the site given by Ehrenberg, as quoted by D. Hunt, *Bradleya* 3:55(1985), as being "bei Zimapan am Caracol, zwischen Lomo del Toro und Las Adjuntas". in view of the precise locality data, we find it difficult to follow his reservations as to the correct use of this name. The only excuse we can find for the fog in which *M. leucocentra* has been usually held is the fact that it grows in a fairly remote area, a good 20km off the main road, i.e. as we mentioned in the first part of this series, a place where no well-behaved *Mammillaria* should ever grow! There exists also some similarity between this species and the newly described *M. albata*, and this may explain in part some of the mess. Spination of both species is quite similar, but *M. leucocentra* is a more globose plant, less flattened than *M. albata*, and its axillary wool is apparently longer lasting, giving it a "lighter", less compact appearance. The likeness with some of the shorter-spined forms of *M. parkinsonii* must also be noted. We do hope that the illustration of this species accompanying our comments will assist in clearing the confusion, but are perhaps too optimistic!

**M. infernillensis:** although this road is marked on no map, we travelled from Zimapan to Vista Hermosa, going through Infiernillo. Not far from this small village, we found a population of very white, caespitose plants (ML 64), individual heads of a diameter of 80 to 100mm, 2 short black-tipped centrals, and about 20 white radials. Woolly axils. They do not branch dichotomously, and as such are in appearance quite distinct from the populations of plants identified as *M. perbella* which can be found between Vizarrón and Cadereyta. Infiernilla (meaning stove in Spanish) is clearly the proper spelling, and perhaps therefore, one may have to correct, according to article 73.1 of the international Code of Botanical Nomenclature, the spelling error made by Craig, and speak of *M. infernillensis*. Please also note that Infiernillo stands in the state of Hidalgo, if our maps are correct, and not in the state of Querétaro, as mentioned by Schmoll according to Craig. We also found another population of generally similar plants (ML 65), but with smaller heads and usually 4 centrals, a few miles from Infiernillo, above Vista Hermosa, in the state of Querétaro.

**M. sempervivi:** this species has been observed by us in many different sites, in the Barranca of Metztlán, and to the west, in the direction of Ixmiquilpan. It always grows in calcareous stone, often in rock crevices. We have found about in equal numbers plants with two short

centrals, and plants with four equally short centrals (ML 24). Seed collected on plants with four centrals have given birth to young plants with the same number. It is usually a small plant, with only little axillary wool, quite different from the plants often found in cultivation, as illustrated for instance by J. Pilbeam, *Mammillaria*, A Collector's Guide, 125(1981) and whose legitimacy we probably should like to question. We have in various sites confirmed here the observation made in Bernal (Queretaro) by C. Glass & R. Foster, *CactSucc. J. Amer.* 43:6-7(1971) of goat-eaten heads of this species, which then give birth to offsets with an appearance very distinct from that of a "normal" plant. However, we do not agree that the observation of these goat-eaten plants should invalidate *M. pseudocrucigera*, as we think that, after W. Minnich, we have observed the "true" *M. pseudocrucigera* (ML 90) near Pozos (Guanajuato). This plant has an olive grey-green body, four dark-tipped centrals, about a half-dozen radials shorter than the centrals, and is quite woolly in the flowering axils. The flowers are of a pinkish creamy white.

**M. uncinata:** this species has a large distribution area. The population above Pachuca is formed of small plants growing very sunken in the ground (ML 7). But it can also grow as a much larger spherical plant, well above the ground.

**M. compressa:** mostly encountered in the eastern part of the state, where it forms huge mounds. The pale yellow spines can reach up to 70mm. We have distributed seed collected 4km south of Tasquillo (ML 59).

**M. magnimamma:** very wide-spread, and variable in the formation of its spines, and in the size and colour of its flowers. In some places, the plants are single, in others, they form either small or large clumps. Two plants growing side by side may well have, one, pink flowers, and the second, cream flowers.

**M. seitziana:** following W. Reppenhagen, with the hope that we are understanding correctly his thinking, we have adopted this name for single long-spined plants found in the north-western quadrant of Hidalgo, together with the name of *M. seitziana* var. *tolantongensis*. Quite clearly, these plants (a) exist, and (b) are completely different from either *M. magnimamma* or *M. compressa*. Now, D. Hunt, *Bradleya* 5:21(1987) in A New review of *Mammillaria* names, suggests that "the name *M. seitziana* post-dates those of the major contenders". Some names, please, David! *M. zuccariniana* perhaps? But that would not fit with your own identification of that plant in the area of Encamacion. By the way, in publishing his *M. erythra*, W. Reppenhagen has helped to solve the old riddle of Lau 1226 from Alcutzingo, Veracruz, identified by J. Pilbeam as *M. zuccariniana*: young plants of *M. erythra* just do not look like *M. mystax*, but have a great degree of similarity with *M. magnimamma* or related species.



*Mammillaria leucocentra*, at Lomo del Toro, Hidalgo. Field number ML62.



*Mammillaria infernillensis*, at Zimapán, Infiernillo, Hidalgo. Field number ML64.