Coryphantha organensis and other cacti at Soledad Canyon, Organ Mountains, New Mexico

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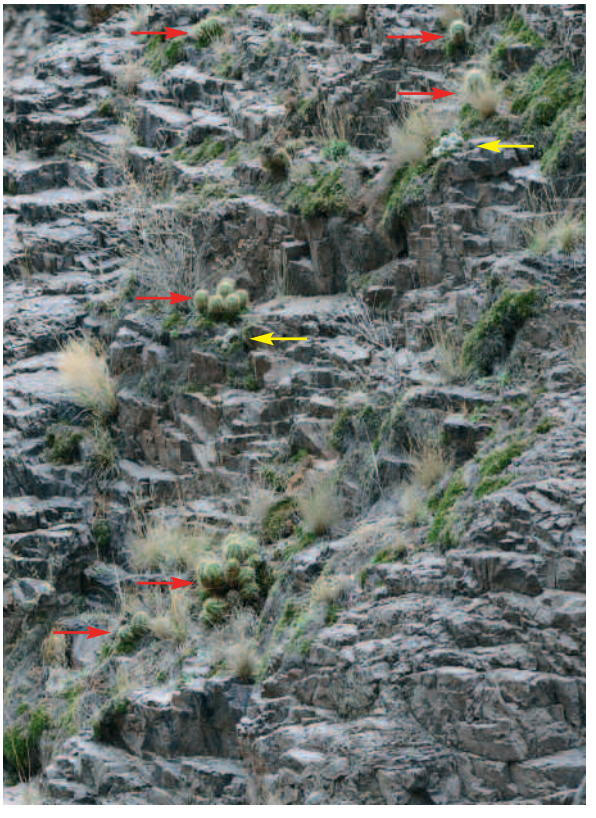
A trip to Soledad Canyon, an easy hike and plenty of cacti. All photos by the author.

The drive into and the hike at Soledad Canyon, may be one of the easiest and most accessible in the Organ Mountains (Fig. 1). The drive is entirely on paved (sealed) roads, with a large parking area and trailhead at the eastern terminus of Soledad Canyon Road. The route is so easy that you only have to make a pair of turns once you exit Interstate 25 at University Drive in Las Cruces. The hike is on a benign trail for about 1.6 miles (2.5 km), rising from the trailhead at about 1,710m (5,600ft) elevation to the base of the waterfall

Fig. 1 (top) Soledad Canyon, looking east towards the Organ Mountains from the trail. The waterfall is hidden from view, but is to the right of centre

Fig. 2 (left) Waterfall at Soledad Canyon, with *Opuntia phaeacantha* and *Yucca baccata* growing about half-way up. For scale, the visible water plummets vertically about 25ft (7.5m)

Fig. 3 (above) North-west-facing igneous cliffs surrounding base of waterfall, with numerous clumps of *Coryphantha sneedii* var. *orcuttii* 'Organensis', looking like many snowballs, and *Echinocereus coccineus* var. *rosei* (elevation 1,905m = 6,250ft)



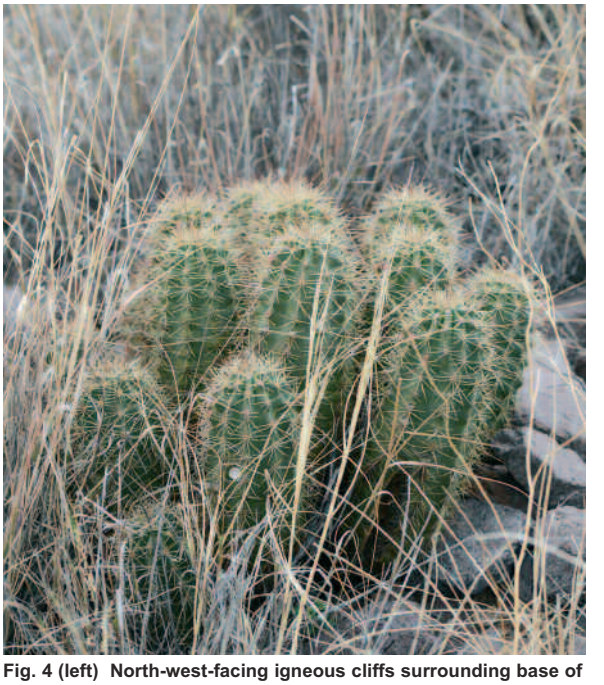


Fig. 4 (left) North-west-facing igneous cliffs surrounding base of waterfall, with two clumps of *Coryphantha sneedii* var. *orcuttii* 'Organensis' (yellow arrows) and six clumps of *Echinocereus coccineus* var. *rosei* (red arrows) (elevation 1,905m = 6,250ft)

Fig. 6 (above) *Echinocereus coccineus* var. *rosei* alongside Soledad Canyon trail, on limestone (elevation 1,800m = 5,900 ft)

at about 1,905m (6,250ft) elevation. Much of the main trail, except right by the waterfall, seems to be almost wheelchair-accessible, albeit not paved. The Soledad Canyon trail and waterfall are located on public lands in Desert Peaks National Monument, about a 15-minute drive from New Mexico State University in

Fig. 5 North-west-facing igneous cliffs surrounding base of waterfall, with *Echinocereus coccineus* var. *rosei* (elevation 1,905m = 6,250ft)

Fig. 7 (above) Close-up of flower buds of *Echinocereus coccineus* var. *rosei* from previous photo

Fig. 8 *Coryphantha sneedii* var. *orcuttii* 'Organensis', SB 823, in cultivation (7 June 2020), which is just starting to branch (but invisible in this photo) after three years of flowering

Fig. 9 (above) *Coryphantha sneedii* var. *orcuttii* 'Organensis', SB 823, in cultivation (25 May 2007). This plant is unusual in having a single large shoot with many tiny offshoots, much like *C. sneedii* var. *sneedii* and unusual in forming offsets when the parent plant was so small and young

Fig. 10 *Echinocereus viridiflorus* var. *chloranthus* along Soledad Canyon trail (elevation 1,713m = 5,620ft). Usually this species is solitary, but not here, where a majority of plants form large clumps

Las Cruces. For a description and map of the trail, see **https://www.alltrails.com/trail/us/new-mexico/soledad-canyon-loop**.

Soledad Canyon trail, the waterfall and the paved part of Soledad Canyon Road are at the western end of Soledad Pass, which contains an old dirt road that is no longer maintained, but which previously ran all the way across the Organ Mountains, from the Tularosa Basin in the east to the Rio Grande Valley in the west. This old dirt road is still visible on Google Earth. This is the only old road that I know of that traverses the Organ Mountains. The problem is that the eastern two-thirds of the Organ Mountains are part of the Fort Bliss army base's 10-mile (16-km) wide buffer zone for its bombing range, so is no longer accessible to the public. The idea is simple: if you lob a large explosive shell farther than expected, you do not want it injuring people, hence the military buffer zone. But, for cactus enthusiasts this should not matter too much because there are virtually no cacti in the main part of Soledad

Fig. 11 (above) An even larger clump of *Echinocereus viridiflorus* var. *chloranthus* along Soledad Canyon trail (elevation 1,737m = 5,700ft)

Fig. 12 (left) A solitary specimen of *Echinocereus viridiflorus* var. *chloranthus* growing well and protected by a honey mesquite, *Prosopis glandulosa*.

Fig. 13 (below) Another solitary specimen of *Echinocereus viridiflorus* var. *chloranthus*, as seen from above, showing pectinate spines

Fig. 14 ***Echinocereus fendleri*** **with a withered fruit on the middle shoot**

Pass. Back in 1987, I explored that area for two days, looking for potential conservation areas, doing this work for the New Mexico Cooperative Fish and Wildlife Service, while nobody was bombing on the range. While the upper parts of Soledad Pass are lovely, with a 3–4km stream running its length, and no signs that army soldiers overshoot their targets, I saw hardly any cacti. The bombing range itself, in the Tularosa Basin has far more and nicer cacti than the main part of Soledad Pass, at least if you are willing to hike through exploded and unexploded ordnance, as well as having the highest density of rattlesnakes I have ever seen (these were seemingly all *Crotalus viridis* var. *viridis*, the prairie rattlesnake). At the western end of Soledad Pass, just east of the Soledad Canyon trailhead, the old Soledad Pass Road coming from the south-east merges with the main Soledad Canyon trail coming from the north-east and the waterfall. So, let us head back to the easily accessible Soledad Canyon trail and waterfall, which have at least eight species of cacti that are easy to find.

Cactus diversity is not as high along this hike at Soledad Canyon as it is at nearby areas, but there are still some gems. The waterfall at the end of the trail is the easiest place to see *Coryphantha organensis* (Zimmerman, 1972), which should more properly be considered a variety or form of either *C. sneedii* var. *orcuttii* or *C. vivipara* (Gorelick, 2015; Gorelick, in review). Throughout this article, I will therefore refer to this taxon by the clumsy name of *C. sneedii* var. *orcuttii* 'Organensis'. *[Editor's note: The New Cactus Lexicon and others include this species as Escobaria sneedii subsp. orcuttii. However, this view is not accepted by all (mainly a North American and European split) and the author chooses to recognise these plants as belonging in Coryphantha.]* Once you get to the waterfall (Fig. 2), look back over your right shoulder and you will see many large clumps of *C. sneedii* var. *orcuttii* 'Organensis' on the surrounding north-facing and north-west-facing cliffs, along with an even larger number of clumps of *Echinocereus coccineus* var. *rosei* (Figs. 3–5). In case of rain – I was there during a rare winter rainfall, so the rocks were inordinately slippery – bring a decent long-distance camera lens, something I had neglected to do, otherwise your photos will be as

Fig. 15 ***Ferocactus wislizeni***

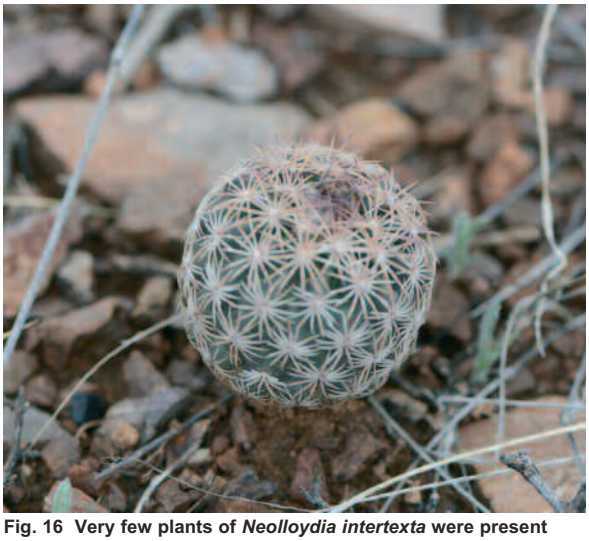


Fig. 16 Very few plants of *Neolloydia intertexta* were present along the trailhead; all were small and close to the trailhead

poor as mine. Not long before you get to the waterfall, note how the rocks have changed from limestone to igneous, which apparently is rhyolite. While both *C. sneedii* var. *orcuttii* 'Organensis' and *Echinocereus coccineus* var. *rosei* can grow on both rock types, the former seems to prefer igneous rocks while the latter seems to prefer sedimentary rocks (Gorelick, 2006a,b). It is easy to see nice clumps of *E. coccineus* var. *rosei* for the entire length of Soledad Canyon Road (at least where there are no houses) and for the entire hike up Soledad Canyon trail, many specimens of which were full of flower buds before the vernal equinox (Figs. 6 & 7), even at 1,800–1,900m elevation. Note that *C. sneedii* var. *orcuttii* 'Organensis' by the Soledad Canyon waterfall seems to be highly caespitose, with no solitary individuals appearing to be present, much like with *C. sneedii* var. *sneedii*. In cultivation, at least for me, *C. sneedii* var. *orcuttii* 'Organensis' often remains solitary for several years before branching (Fig. 8), although I have grown one highly caespitose specimen that started branching when still quite young and small (Fig. 9). There do not appear to be any other species of *Coryphantha* or *Mammillaria* along Soledad Canyon trail, just *C. sneedii* var. *orcuttii* 'Organensis', and only at the waterfall.

Coryphantha sneedii var. *orcuttii* 'Organensis' is not the only cactus that seems more highly branched at Soledad Canyon than is usual – so does *Echinocereus viridiflorus* var. *chloranthus*. Along this trail, a majority of specimens of *E. viridiflorus* var. *chloranthus* have formed clumps with over a half-dozen shoots (Figs. 10 & 11). Each clump appeared to be a single clone, with shoots firmly attached and with uniform spination amongst shoots in a clump, and no signs of injury to any of the shoots, which could cause branching. There were some solitary plants of *E. viridiflorus* var. *chloranthus* here, but these were in the minority (Figs. 12 & 13). At other nearby locations, *E. viridiflorus* var. *chloranthus* is mostly unbranched, ie solitary, or, if branched, with only a handful of shoots.

Echinocereus fendleri can also easily be found along the Soledad Canyon trail and, at least here, is always branched (Fig. 14). But *E. fendleri* was not nearly as common here as its two congeners, *E. coccineus* and *E. viridiflorus*.

Soledad Canyon trail is also dotted by a few specimens of *Ferocactus wislizeni* (Fig. 15), which can sometimes be nicely camouflaged by surrounding grasses, which always amazes me for such a large plant. There are also a handful of very small specimens of *Neolloydia intertexta* (*Echinomastus intertextus*) along Soledad Canyon trail,

Fig, 17 Every plant of *Cylindropuntia imbricata* along the Soledad Canyon trail was dead or dying. Larger plants looked especially bad, with many dead skeletons. Small plants superficially looked better, but were still all showing signs of disease

but only near the trailhead (Fig. 16). Both of these species are far more common just to the south, in Achenbach Canyon and Peña Blanca, where the plants are also typically larger (Gorelick, 2006c).

For anybody who likes chollas, the Soledad Canyon trail was depressing insofar as every specimen of *Cylindropuntia imbricata* was dead or dying (Figs. 17 & 18). I asked about the cause of death, but never got a definitive response, with some people suspecting infestation by horned beetles and others suspecting infestation by fungi. For all we know, the beetles might be transmitting the fungi. At least in nearby Achenbach Canyon, plants of *C. imbricata* are doing beautifully, for now.

The Soledad Canyon trail, especially closer to the waterfall, had lots of big clumps of plants resembling *Opuntia phaeacantha* (Figs. 18–20). Many were even seemingly in fruit in mid-March, although this could be a tell-tale sign that the fruits were sterile (Figs. 21 & 22). However, I did not have the foresight to cut any prickly pear fruits open to look for viable seeds, which simply meant that I did not feel like trying to eat any of the fruits. Instead, *Ferocactus wislizeni* provided my cactus fruit snack on this short hike.

Among the non-cactaceous succulents along the trail there were also a few small specimens of *Yucca baccata*

Fig. 18 (top) The small plant of *Cylindropuntia imbricata* does not yet look too stressed nor diseased here, but note that it is growing at the foot of a large dead cholla skeleton. Also in this photo are *Echinocereus coccineus* var. *rosei*, a large plant in the *Opuntia phaeacantha* complex, and, in the background, the ubiquitous *Dasylirion wheeleri*

Fig. 19 (centre) Plants in the *Opuntia phaeacantha* complex, in front of a cave at the start of the igneous rocks, at around 1,860m (6,100ft) elevation

Fig. 20 (right) *Opuntia phaeacantha* complex and *Dasylirion wheeleri* at the start of the igneous rocks

(Fig. 23) and some almost mature specimens of *Agave parryi* var. *neomexicana* (Fig. 24). Given that it was almost spring, the poppies (*Eschscholzia californica* subsp. *mexicana*) were just starting to bloom, which is always a treat.

For a truly easy hike that is easy to drive to, try Soledad Canyon. There are enough easy-to-find cacti here to make even a cactus aficionado happy. And, if you want to see more, try one of the nearby canyons such as Dripping Springs to the north or Achenbach Canyon to the south or even undeveloped lands at lower elevations to the west.

Except for Figs. 8 & 9, all photos were taken at Soledad Canyon on 12 March 2020.

ACKNOWLEDGEMENTS:

Thanks to Carol Sutherland and Dave Ferguson for thoughts on what is killing *Cylindropuntia imbricata*. Thanks to Dave Ferguson for trying to teach me about the *Opuntia phaeacantha* complex, even if I have been a dreadful student.

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Fig. 21 *Opuntia phaeacantha* complex, with many elongated fruits per pad, (elevation 1845m = 6,050ft). The fruits were probably sterile, ie without viable seeds. This was the only specimen of prickly pear along Soledad Canyon trail that had bluish or purplish pads

Fig. 22 *Opuntia phaeacantha* complex, with very different looking fruits, (elevation 1830m = 6,000ft). Again, the fruits are probably sterile.

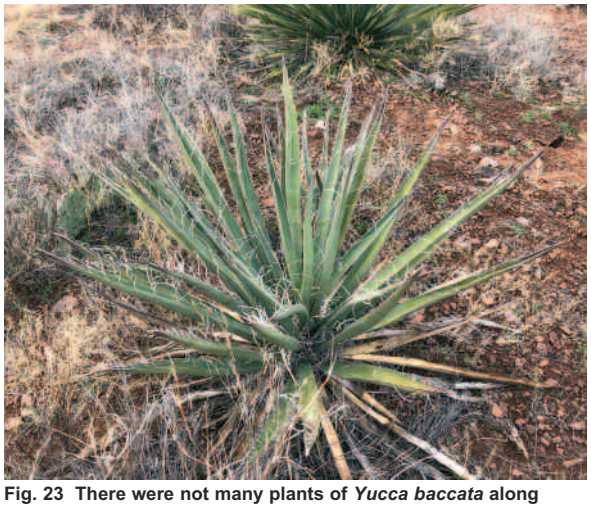

Fig. 23 There were not many plants of *Yucca baccata* along Soledad Canyon trail, and all of them were relatively small, not the typical 3.0–4.5m (10–15ft) tall trees seen elsewhere nearby

Fig. 24 *Agave parryi* subsp. *neomexicana*

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