Ferocactus hamatacanthus at Big Bend

Root Gorelick

Record of a visit to the habitat of *Ferocactus hamatacanthus*. Photography by the author.

In late April 2011, I made my first ever foray to Brewster and Presidio Counties in west Texas to look at cacti in Big Bend National Park and visit Martin Terry of Sul Ross State University. Martin kindly showed me many wonderful cacti in Presidio County and oriented me to Trans-Pecos vegetation and geography, but I was on my own in Big Bend. There are many wonderful cacti here, many of which do not make the short distance north to the New Mexico border, where I have spent hundreds of hours botanising. Brewster and Presidio Counties contain many cacti that should be on virtually every wish list to see in habitat, including *Ariocarpus fissuratus, Lophophora williamsii*, and *Thelocactus bicolor* var. *flavidispinus*, all of

Fig. 1 ***Ferocactus hamatacanthus*** **(22 Apr 2005) in cultivation at the Desert Botanical Garden**

Fig. 2 *Ferocactus hamatacanthus* (26 Apr 2011) at Hot Springs, on a cliff along the Rio Grande with *Opuntia rufida* and *Fouquieria splendens*

Fig. 3 *Ferocactus hamatacanthus* (26 Apr 2011) at Boquillas Tunnel with *Opuntia rufida*

Fig. 4 *Ferocactus hamatacanthus* (26 Apr 2011) at Boquillas Tunnel with *Opuntia rufida* [close-up]

which now hold vivid memories for me and appear in treasured photographs. There are also some plants at Big Bend that are on almost nobody's wish list, such as *Cylindropuntia kleiniae*, a species that frankly looks no better in the wild than it does in cultivation. However, the plant at the top of my list before flying to Texas was *Ferocactus hamatacanthus*, which is aptly named for its one very long hooked central spine per areole (all the other spines are usually straight).

Who goes to the Chihuahuan Desert to look for a modestly-sized barrel cactus? Maybe this was a sign of old age, not wanting to search for cryptic diminutive plants (which I did in fact actively look for, but that is a story for another day), or it could be a sign of living for many years in the Sonoran Desert, where about half the cactus species are large. Or maybe it was a sign of having successfully cultivated *F. hamatacanthus* for several years in southern Arizona and admiring the specimen cultivated at the Desert Botanic Garden in Phoenix (Fig. 1). Regardless, I was not disappointed by west Texas, nor by this *Ferocactus* species.

Powell & Weedin (2004: 293) stated that "*Ferocactus hamatacanthus* var. *hamatacanthus* is one

Figs. 5 and 6 ***Ferocactus hamatacanthus*** **(26 Apr 2011) at Boquillas Tunnel with** ***Euphorbia antisyphilitica***

Fig. 7 ***Ferocactus hamatacanthus*** **(26 Apr 2011) in Presidio County with** ***Opuntia rufida***

of the most widely distributed cacti, but not the most abundant, in the Big Bend and east-central regions of the Trans-Pecos". In virtually every limestone outcrop under 1500m elevation, if looked for long enough, I could find this species, although while standing at one of these plants and scanning in all directions, I could not usually find another specimen. Nevertheless, another isolated plant could usually be found after walking for five or ten minutes in places with the right-looking geography and geology. While I made no attempt to quantify this, *F. hamatacanthus* seems like a nice case for what ecologists call underdispersion.

The easiest way for me to find *F. hamatacanthus* was simply to look upwards at a limestone ledge or cliff, and often there they were, at the top edge of the limestone (Figs. 2–4).

One reason that *F. hamatacanthus* may not seem abundant is that specimens can be well-hidden, growing in dense clumps of other large plants, such as *Euphorbia antisyphilitica* (candelilla), *Hechtia texensis* (Texas false agave), and *Prosopis glandulosa* (honey mesquite) (Fig. 5). Without perfect lighting or standing right above the plant, as I did in Figure 6, these were really difficult to find. One irony is that *Hechtia texensis* is itself

Fig. 8 (above) *Ferocactus hamatacanthus* (27 Apr 2011) at Mule Ears with *Jatropha dioica* & *Larrea tridentata*

Fig. 9 (below) *Ferocactus hamatacanthus* (26 Apr 2011) at Hot Springs, along a one-way road

Fig. 10 (above) and Fig. 11 (below) *Ferocactus hamatacanthus* (26 Apr 2011) at the mouth of Boquillas Canyon with *Opuntia rufida* and *Prosopsis glandulosa*

Fig. 12 ***Ferocactus hamatacanthus*** **(26 Apr 2011) at the mouth of Boquillas Canyon with** ***Opuntia rufida*** **and** ***Prosopsis glandulosa*** **[close-up]**

considered less abundant than it actually is, because without inflorescences this bromeliad looks very much like the ubiquitous *Agave lechuguilla* (locally Lechuguilla or Shin Dagger Agave) (Powell 1988). *Ferocactus hamatacanthus* is a lovely plant that, with even a little patience, you should have no problem finding in Big Bend.

With one exception, all the specimens I saw were under 25cm in diameter and height. These were compact, slightly sunburnt plants with a dense covering of spines (Figs. 7–9). Admittedly I photographed these plants seven-and-a-half months after the last trace of rain and after several record freezes in the intervening dry months. So these plants may have been a bit stressed. Even I was slightly stressed, having had my plane de-iced as I departed from home in Ottawa, Canada, to go hiking in Texas with temperatures that were between 40° and 43°C every afternoon. The one large, green and hardly compact plant was a clump growing alongside the Rio Grande at the upstream entrance to Boquillas Canyon (Figs. 10–12). The tallest stem here was about two-thirds of a metre tall. Other than the immense size, this specimen looked a lot like pampered cultivated specimens. I saw a few other specimens closer to the Boquillas Canyon trailhead, but all of these were of the more typical compact sunburnt form.

ACKNOWLEDGEMENTS:

Thanks to Mike Powell, Michael Eason, and especially Martin Terry for being so gracious and helpful.

LITERATURE CITED:

Powell, A M (1988) *Trees & shrubs of Trans-Pecos Texas, including Big Bend and Guadalupe Mountains National Parks.* Big Bend Natural History Association, Big Bend National Park.

Powell, A M & Weedin, J F (2004) *Cacti of the Trans-Pecos and adjacent areas.* Texas Tech University Press, Lubbock.

Root Gorelick, Ph.D.
Department of Biology and School of Mathematics & Statistics, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario, K1S 5B6, Canada

Email: Root_Gorelick@carleton.ca

Layout by David Quail