

Opuntia tortispina

Commonness and ease of growing prickly pears makes the genus *Opuntia* less than popular. Ubiquity of glochids does not help. Nonetheless, *Opuntia tortispina* ENGELMANN & J.M. BIGELOW (synonym *O. cymochila*) is a charming plant, at least for Canadians. It is exceptionally hardy outdoors and can be cultivated in unprotected places that routinely get to -30°C for a week of consecutive nights each year, along with much rain and snow. It is a robust plant, with pads that are about 13 cm long and 10 cm wide, even in cultivation in Ontario. The pads grow upright and even remain so in winter. The spines are stout and relatively numerous and about 5–6 cm long, at least on the distal half of each pad. *O. tortispina* does not have as many nor as obvious glochids compared with the other Canadian prickly pears, *O. polyacantha*, *O. fragilis*, *O. humifusa*, and *O. ×columbiana*.



1. *Opuntia tortispina* (28 Aug 2018) collected in Tukumcari NM, cultivated in Kawartha Highlands, ON.

The spinier plant pictured here (Figs. 1 and 2) was collected from an abandoned lot in Tukumcari, NM in early January 2016, but then sat in a cardboard box for four and half months until the ground thawed out in Ontario. After two Canadian winters, this plant does not seem worse for that treatment.



2. *Opuntia tortispina* (28 Aug 2018) collected in Tukumcari NM, cultivated in Kawartha Highlands, ON.

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3. *Opuntia tortispina* (22 June 2014), I-76 and CR-55, 5 km S of Illiff, CO.

Opuntia tortispina grows throughout the Llano Estacado and southern Great Plains and areas to their west, but always east of the Rocky Mountains and east of the Rio Grande, in New Mexico, Colorado, Texas, Oklahoma, Kansas, Nebraska, and Wyoming. While driving cross-country, this species can be readily seen along several interstate highways, including I-40, I-70, I-76, and I-80. Along I-76 during the summer solstice of 2014, this species was in full flower for over 100 km in the far northeast corner of Colorado, with millions of flowers right alongside the highway, each

with yellow petals that are red at the base (Fig. 3). This species was not obvious in neighbouring parts of Nebraska, but probably only because maize had been planted right up to the shoulder of highways in the so-called “corn husker state”.

Flora of North America (Pinkava 2003) considers *Opuntia tortispina* to be of hybrid origin, via many independent crosses of *O. polyacantha* to the west and *O. macrorhiza* to the east, where the two species grow sympatrically. Like *O. polyacantha*, *O. tortispina* is morphologically variable. Nonetheless, the two species can be distinguished by *O. tortispina* always having upright pads (pads are often procumbent in *O. polyacantha*), with stout spines in *O. tortispina* (spines are often long and flexible, sometimes almost hair-like, in *O. polyacantha*). *O. tortispina* resembles *O. macrorhiza* by growing shoots from large fleshy underground roots, whereas *O. polyacantha* forms long chains of pads and usually only has long thin fibrous roots. These distinguishing features are evident both in habitat and cultivation.

I grow *Opuntia tortispina* on the Canadian Shield, in an inch or two of pea gravel, with the only underlying soil being a thin mat of juniper roots on top of bedrock, with the juniper plants having become recently deceased. The trick is having a sunny location. The only damage this species has incurred in cultivation has been minor, being dug up by a snapping turtle laying her eggs (Fig. 4)!

REFERENCE

Pinkava DJ (2003) *Opuntia* (Cactaceae) Miller. In: *Flora of North America*, Volume 4. Editor: Flora of North America Editorial Committee. Oxford University Press. Pages 123-49.



4. Snapping turtle in cactus garden (13 June 2018) Kawartha Highlands ON (*Brasenia schreberi* floating in background).