'Cow's Tongue' Opuntia, a Garden Form

Joseph Shaw^{1*}, Nancy Hussey², David J Ferguson³

- 1 Germantown, MD Email: jshaw@opuntiads.com
- 2 Meadview, AZ Email: nancy@opuntiads.com
- 3 Rio Grande BioPark, Albuquerque, NM Email: davef@opuntiads.com
- *Corresponding author: Joseph Shaw ELS PhD Email: jshaw@opuntiads.com

Griffiths treated this taxon as a discrete species (*Opuntia linguiformis* Griffiths, *Annual Report of the Missouri Botanical Garden* **19**: 270. 1908). The Flora of North America online treats it at the varietal rank (*O. engelmannii* Salm-Dyck ex Engelmann var. *linguiformis* (Griffiths) B.D. Parfitt & Pinkava, *Madroño* **35**: 347. 1989 [1988 publ. 1989]). In 1969, Lyman Benson treated it as a variety of *Opuntia lindheimeri* (*Opuntia lindheimeri* Engelm. var. *linguiformis* (Griffiths) L.D. Benson, 1969, *Cactus & Succulent Journal* (*Los Angeles*) **41**: 125).

These different publications are referring to a large Opuntia with elongate, tongue-shaped pads. The plant is known in gardens as the 'Cow's Tongue' or 'Lengua de Vaca'. Large pads may be 3 to 8 inches wide near the base, and to as much 30 inches long (sometimes more), and taper to a rounded point (Figures 1 & 2). The sprawling plants may reach 3 to 5 feet tall (exceptionally to as much as 10 feet) and have attractive yellow flowers with green stigmas. The plants have the characteristic shiny yellow spines of regular O. lindheimeri that may have a tinge of red at their base. Depending upon your choice of taxonomic treatment, it may have derived from O. lindheimeri or O. engelmannii var lindheimeri.

Griffiths described the plant as "ascending or half prostrate" with young growth blue glaucous green. He described the flowers as yellow or old gold in colour and about 3 inches wide, a very garden worthy plant. However, 'Cow's Tongue' cactus belongs in a large garden because it can easily spread 5 feet or more across.

In actuality, the 'Cow's Tongue' cactus is a sport of *O. lindheimeri* that likely derived

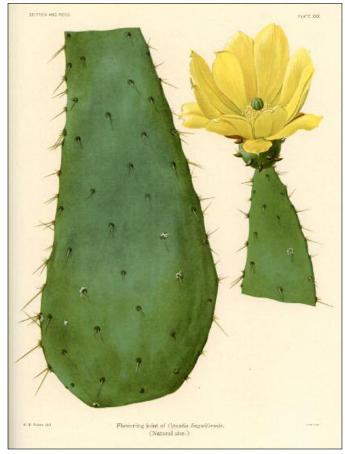


Figure 1. Pad of 'Cow's Tongue' Cactus

Plate XXX from N.L. Britton and J.N. Rose, *The Cactaceae: Descriptions and Illustrations*

of Plants of the Cactus Family, Carnegie

originally from a single plant. It was found near San Antonio in Bexar County, Texas from where it was taken and cultivated in gardens. It is a form or cultivar derived from a single wild plant and is not a species, subspecies, or variety. The tongue-shaped pads are formed because the apical meristem is indeterminate and does not limit the growth of the pad. Some pads may be up to 3 feet in length or more. Perhaps they could be even longer but eventually they do stop growing—perhaps

Number 22 September 2018

limited by the end of the growing season or some other factor. Though unusual, the "Cow's Tongue" aberration has been found in other *Opuntia* species, and perhaps the same genes are responsible for all such occurrences.

'Cow's Tongue' plants routinely revert, at least in part, producing some regular-appearing *O. lindheimeri* pads or even entire branches (Figure 3). Cuttings made from these pads typically grow into entirely normal *O. lindheimeri* plants.

Interestingly, even though these plants sometimes revert to normal growth, the mutation is heritable, and offspring grown from seed commonly (but not always) show the same condition, whether they are pure *O. lindheimeri* or hybridized with other species. This means that all 'Cow's Tongue' plants in gardens are not now necessarily clones of the single original parent.

The 'Cow's Tongue' cactus has spread far and wide from its original parental plant and is often associated with dwellings, even abandoned ones. However, occasional plants or even whole stands can be found in wild places even far outside the range of *O*. lindheimeri. How they came to be there is anyone's guess, but it seems likely that they mark the spot of long-gone habitations, dumping of landscape debris, or even spread by birds or water. The plant is widespread in eclectic locations from Texas, to southern Oklahoma and California. It is as cold-hardy as regular O. lindheimeri, surviving into USDA hardiness zone 7, but the pads may suffer cold damage in upper USDA zone 7, even while the plant remains intact. A mature plant can regrow from cold that freezes it nearly to the ground.

Joseph Shaw

ISSN 2048-0482 The Cactus Explorer



Figure 2. 'Cow's Tongue' Cactus, in Tucson, Arizona



Figure 3. 'Cow's Tongue' Cactus in Albuquerque, New Mexico. Branch reverting to normal *Opuntia lindheimeri* shape.