

Agave jimenoii (Agavaceae): another brand new species of “Century Plant” from Veracruz, Mexico

Miguel Cházaro-Basañez & Héctor V. Narave-Flores (Mexico)



Agave jimenoii, in habitat, Veracruz, Mexico.

© M.Cházaro.

INTRODUCTION

Up to now we have published numerous papers dealing with different aspects of the Agaves of Central Mexico, mostly floristic and taxonomic issues, in this journal (*International Cactus Adventures*) or other journals (see Chazaro (1995 & 1997) on *Agave wendtii*; Cházaro, Acevedo & Mostul. (1998) on *Agave pedunculifera* and *A. attenuata*; Cházaro & Mostul (1999) on *Agave guadalajarana*; Cházaro (2001) on *Agave pendula*; Cházaro & Valencia (2003) on *Agave impressa*; Cházaro, Vázquez & Valencia (2004) on *Agave geminiflora*; Chazaro, Valencia & Vázquez (2004a) on *Agave rzedowskiana*; Cházaro, Vázquez & Vargas (2005) on *Agave valenciana*; Cházaro, Vázquez, Valencia & Machuca (2005^a) on *Agave nayaritensis*; Cházaro, Valencia, Machuca & Vázquez (2006) on *Agave gypsophila*; Cházaro & Vázquez (2006a) on *Agave durangensis*; Cházaro, Lomeli, Valencia & Vargas (2007), on *Agave*

vazquezgarciae; Cházaro, Vázquez, Valencia, Valenzuela & Nieves (2009), on *Agave arcedianoensis*; Chazaro, Jimeno, Meer & Roosbroeck (2009) on *Agave warelliana*; Cházaro, Jimeno & Oliva (2010), on *Agave gomezpompae*; Vázquez, Valencia, Morales & Chazaro (2009) on *Agave chazaroi*.

RESULTS

The finding of this new species of “century plant” was somehow peculiar and quite fortuitous; this is part of the story:

It happens that my sister Teresa Chazaro-Rundlett, who lives in Charlotte, North Carolina, USA, comes every summer to our hometown, Xalapa, Veracruz, so did I, coming from Guadalajara, Jalisco, in western Mexico to Xalapa.

Xalapa city lies in Eastern-Central part of the country, we meet with the our others numerous brothers and my sister Chazaro Basañez, and planned some activity outdoors, Teresa likes very much to go rafting, so in this occasion guided by our nephew Carlos Castillo-Chazaro, an expert in extreme sports and especially in rivers descents; the crew was composed of all relatives brothers, sisters, nephews and nieces.

On Tuesday, 5th of August 2008, we took a rafting at the Filobobos river, which is some



kilometers north of Tlapacoyan city, in central Veracruz state; as we were walking downhill to the canyon where the river lies at the bottom, and the boats we have to board, to start it out the rafting, rocky cliffs appears along the way, and I surprisingly noticed an *Agave* population hanging from the cliffs, I immediately realized it was a novelty, very likely a new species, but all plants were unreachable without a rope and besides, they were devoid of flowers.

Back to Guadalajara, I called David Jimeno, living then in Xalapa, whom on 30th April 2009, with the adequate equipment for rock climbing went to collect the plants, that were in bloom and it was an undescribed species indeed, these samples became the herbarium type and isotypes, and we named it after him, since David Jimeno is skillfull at plant drawing, photography and as a plant taxonomist.

Río Filolobos, Veracruz, Mexico. © M.Cházaro.



El Encanto Waterfall, Veracruz, Mexico.

© M.Cházaro.



Miguel Chazaro, Patricia Hernandez and relatives, during a rafting at Filobobos river, 5 august 2008, Veracruz, Mexico.

© Authors..

Agave jimenoii CHAZARO & A. VAZQUEZ

Description: Plants up to 60 cm high, no offsets are formed, neither bulbils, polycarpic (from poly = many and carpic = fruits), means that unlike the other *Agave* species, that are monocarpic, after blooming and set fruits and seeds die out, this one flowers more than one time and does not die out, stem 35-90 cm long, 5.1-6 cm of diameter at the base, hanging, bifurcate, each branch bearing a terminal rosette with 16-20 leaves, leaves 39-42 cm long, by 8.4-8.5 cm wide, oblanceolate, flexible, green-glaucous, margin denticulate, of the same colour as the leaves, shaft (floral stem), 132-140 cm long, lateral, an erect spike, **flowers** yellow, 28-30 mm long, geminate (in pairs), 6 tepals, 17.5-20 cm long, fruit an elliptic capsule, 15.8- 18.8 mm long, seeds black when ripe (Chazaro & Vazquez, 2003).

Type: Mexico, Veracruz state, Tlapacoyan county, El Encanto waterfall, at the Filobobos river, 19 59 38 L. N., 97 10 40 L. W., 150 masl, 30 April 2009 (flowers). H. D. Jimeno S., G. Sanchez V., J. R. Fernandez No. 702 (Holotype XAL, isotypes MEXU, IBUG). Paratype: Locality idem, 16 July 2011 (fruits). M. Chazaro, H. Narave & J. Vazquez S/N (IBUG, MEXU, XAL herbaria).

Common name: “maguey de peña” that translated to English means “the century plant of the rocks”.

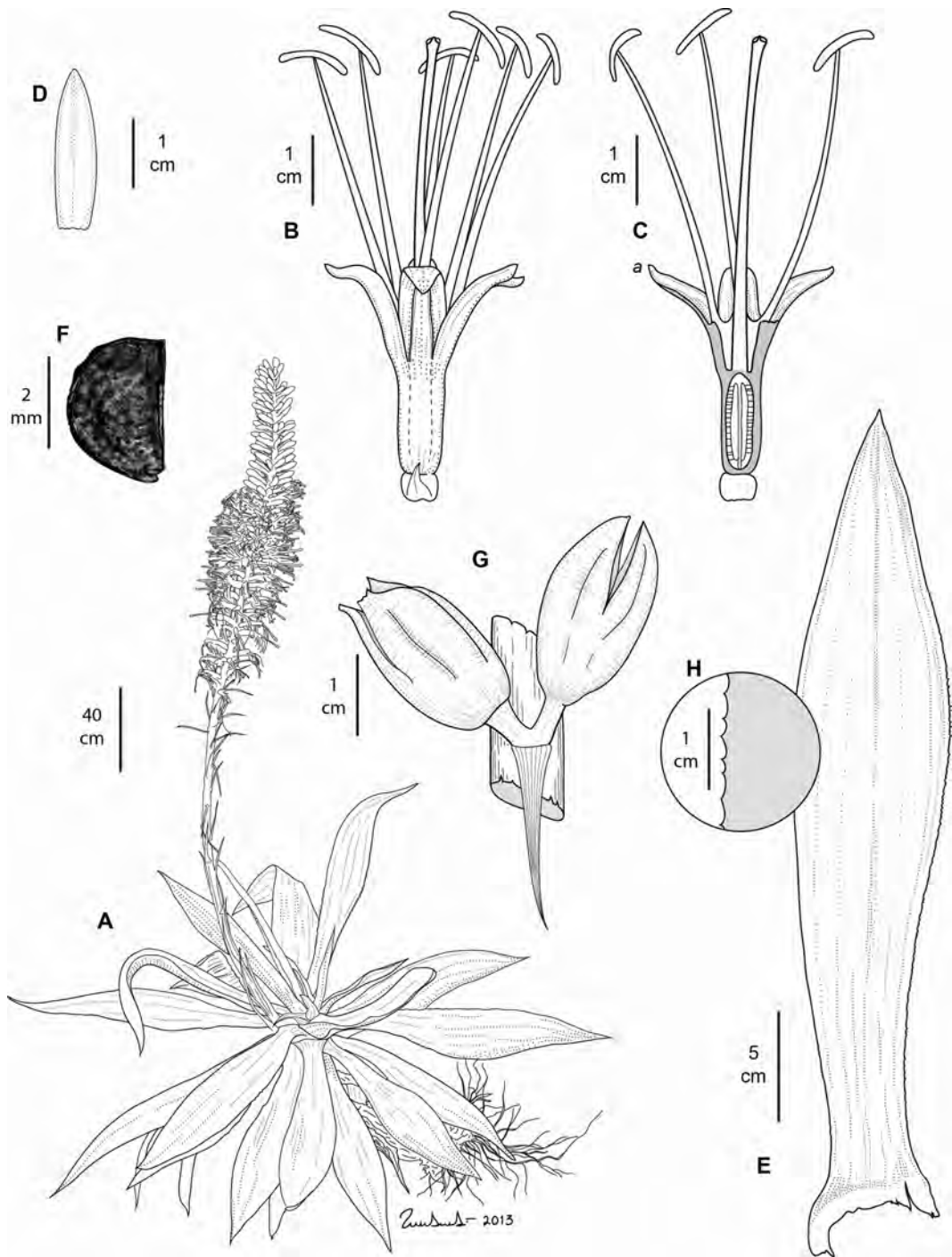
Phenology: in bloom during April to June, with fruits in July and August.

Type of vegetation: it grows in the subperennial tropical forest, however it is a cremnophyte plant, that means it thrives on rocky cliffs.

Distribution: so far only known from Central Veracruz, collected and seen by us at the rocky cliffs of the Filobobos river canyon, near the El Encanto waterfall, at 150 m in alt., at Tlapacoyan county, a second population was seen by at San Pablo, near Gutiérrez Zamora town, that was unreachable due to be growing in a big rocky cliff.

It belongs to the Polycephalae group of Gentry (1982) that by now comprises the following 9 species:

- 1.- *Agave mitis* Sal-Dyck (= *A. celsii*)
- 2.- *A. chiapensis* Jacobi
- 3.- *A. gomez-pompae* Chazaro & Jimeno-Sevilla
- 4.- *A. pendula* Schnisstp.
- 5.- *A. obscura* Schiede (= *A. polyacantha* Haworth)
- 7.- *A. warelliana* Baker
- 8.- *A. wendtii* Chazaro
- 9.- *A. jimenoii* Chazaro & A. Vazquez

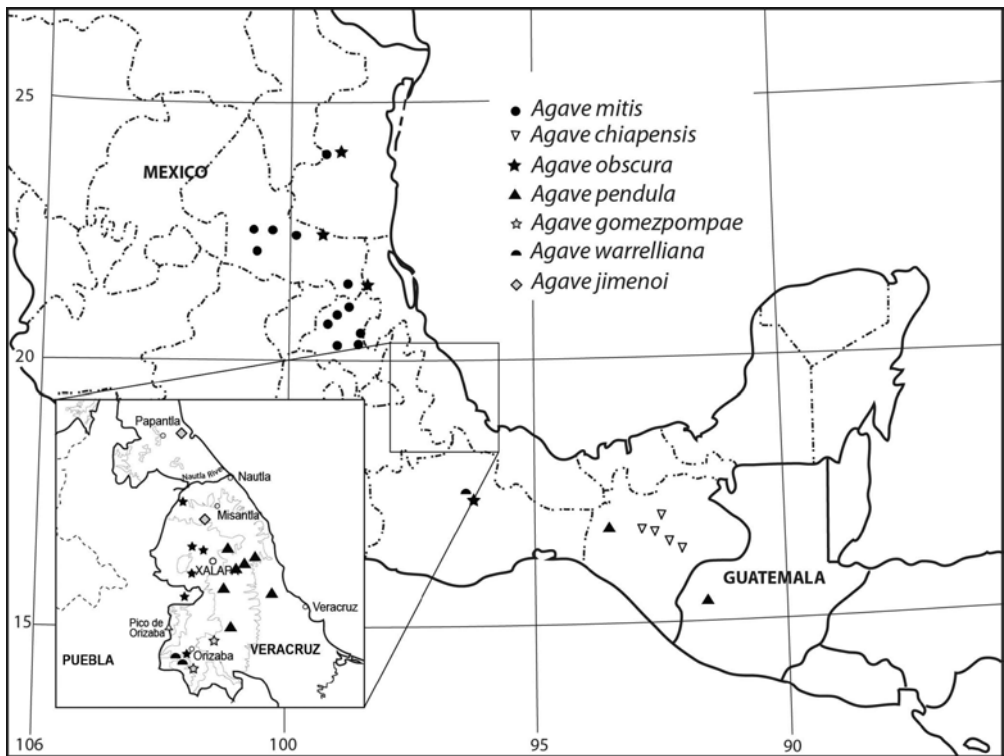


Agave jimenoii. A. habit, B. flower, C. Flower longitudinal section, D. Tepal, E. Leaf, F. Seed, G. Capsule, H. Denticulation detail. Drawing by David Jimeno-Sevilla.



Agave jimenoii, in habitat, Veracruz, Mexico. © M.Cházaro. Infl. © David Jimeno. Seeds © M. Cházaro.

Distribution of Agave (Polycephalae group).



All nine species are endemic to Eastern Mexico, the closest related phylogenetic species with *A. jimenoii* is *A. gomez-pompae*. Among the Polycephalae group, *A. jimenoii* is the one growing at lowest altitude (150 m). *Agave wendtii* Chazaro, from the Encajonado canyon at the Uxpanapa river, *Agave gomez-pompae* Chazaro & D. Jimeno, from the environs of Córdoba and Zongolica and *A. jimenoii*, are the 3 species endemic to the state of Veracruz.

Uses: since it is scarce and a cremnohyte (a plant that grows in rocky cliffs) currently it has no uses, however it could be introduced in cultivation as an ornamental.

Miguel Cházaro-Basañez (Mexico)
Facultad de Biología, Universidad Veracruzana, Xalapa, Veracruz, Mexico
E-mail: chazaro55@hotmail.com

Héctor V. Narave-Flores
Facultad de Biología, Universidad Veracruzana, Xalapa, Veracruz, Mexico
E-mail: hnarave@uv.mx

ACKNOWLEDGMENTS

Thanks are due to M. Chazaro B., my sister Teresa Ch. Rundlett, whom sponsored the first trip to Filobobos river; Alberto Badia, Jeronimo Vazquez-Ramirez, for their help during the field trips.

BIBLIOGRAPHICAL REFERENCES:

- Chazaro B., M. 1995. Una nueva especie de *Agave* (Agavaceae) del sureste de México. *Cactáceas y Suculentas Mexicanas*. 40(4): 92-96.
- Cházaro B., M. 1997. A new species from Mexico: *Agave wendtii* Chazaro. *Int. Cactus Adventures* 35: 12-14.
- Cházaro B., M., R. Acevedo R. & B. L. Mostul. 1998. *Agave pedunculifera* Trel. and *A. attenuata* Salm-Dyck. *Int. Cactus Adventurs* 37: 9-13.
- Cházaro B., M. & B. L. Mostul. 1999. In habitat: *Agave guadalajarana*. *Int. Cactus Adventures* 44: 10-12.
- Cházaro B., M. 2001. In situ: *Agave pendula* Schnitss. *Int. Cactus Adventures* 49: 31-34.
- Cházaro B., M. & O. Valencia P. 2003. Introducing the succulent flora of Mexico: *Agave impressa* Gentry. *Int. Cactus Adventures* 57: 31-34.
- Cházaro B., M., A. Vázquez G. & O. Valencia P. 2004. *Agave geminiflora* in habitat. *Int. Cactus Adventures* 63: 30-33.
- Chazaro B., M., O. M. Valencia P. y J. A. Vázquez G., 2004a Introducing the succulent flora of Mexico: *Agave rzedowskiana* Carrillo, Vega y R. Delgadillo. *Int. Cactus Adventures* 62: 27- 31.
- Cházaro B., M., J. A. Vázquez G. & Y. L. Vargas R. 2005a. *Agave valenciana*, a brand new gigantic species from Mexico. *Int. Cactus Adventures* 68: 24-29.
- Cházaro B., M., J. A. Vázquez G., O. Valencia P. & J. A. Machuca N. 2005c. In situ: *Agave nayaritensis*. *Int. Cactus Adventures* 66: 33-37.
- Cházaro B., M., O. Valencia P., J. A. Machuca N. & J. A. Vázquez G. 2006b. In situ: *Agave gypsophila*. *Int. Cactus Adventures* 70: 15-19.
- Cházaro B., M. & J. A. Vázquez G. 2006c. In situ: *Agave durangensis*. *Int. Cactus Adventures* 72: 24-30.
- Cházaro B., M. J. A. Lomeli S., O. Valencia P. & Y. L. Vargas R. 2007 Una nueva especie de *Agave* (Agavaceae) del estado de Jalisco (*A. vazquezgarciae* Cházaro & Lomeli. *Int. Cactus Adventures* 74: 24-31.
- Cházaro B., M., J. A. Vázquez G., O. Valencia P., A. Valenzuela Z. & G. Nieves H. 2009. *Agave arcedianoensis* (Agavaceae) otra nueva especie de Jalisco, México. *Int. Cactus Adventures* 82: 33-37.
- Chazaro B., M. D. Jimeno S., P. van der Meer & J. van Roosbroeck. 2009. *Agave warelliana* (Agavaceae), a new record from Veracruz, Mexico. *Int. Cactus Adventures* 78: 24-30.
- Cházaro B., M. D. Jimeno S. y H. Oliva R. 2010. *Agave gomezpompae* Cházaro & Jimeno-Sevilla, una nueva especie de *Agave* (Agavaceae) del centro de Veracruz, México. *Int. Cactus Adventurs* 88: 2-11.
- Chazaro-Basañez, M. & J. A. Vázquez-García. 2013. *Agave jimenoii* (Polycephalae Group, Asparagaceae), a new species from the Totonocapan region, Veracruz, Mexico. *Phytotaxa* 134 (1): 55-60.
- Gentry, H. S. 1982. *Agaves of Continental North America*. Arizona University Press, Tucson, Arz. , 670 pp.
- Vázquez G. J. A.; O. Valencia P., V. G. Morales R. & M: Chazaro B. 2009. *Agave chazaroi* (Agavaceae), a new species from Jalisco, México. *Int. Cactus Adventures* 84: 8-13.