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*Garrya ovata* benth. subsp. *goldmanii* (wooton & standl.) dahling (garryaceae) and *beschorneria calcicola*  
*garcía-mendoza* (agavaceae): two new reports from Veracruz, México.  
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**GARRYA OVATA BENTH. SUBSP. GOLDMANII (WOOTON & STANDL.) DAHLING  
(GARRYACEAE) AND BESCHORNERIA CALCICOLA GARCÍA-MENDOZA  
(AGAVACEAE): TWO NEW REPORTS FROM VERACRUZ, MEXICO.**

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**ABSTRACT**

New reports of *Garrya ovata* ssp. *goldmanii* (Wooton & Standl.) Dahling and *Beschorneria calcicola* García-Mendoza are presented for the state of Veracruz, Mexico. Both taxa were found on karstic hills in the arid zone of Veracruz near Tenex-tepec, Perote. *Garrya ovata* ssp. *goldmanii* is a small shrub measuring up to 1.5 m tall, which contrasts considerably with *G. laurifolia* Benth. ssp. *laurifolia* and *G. laurifolia* Benth. ssp. *macrophylla* already registered for Veracruz. These are shrubs or trees from 2 to 10 m tall. *Beschorneria calcicola* is a small rosetiform plant measuring up to 60 cm tall which contrasts with *B. yuccoides* K. Koch ssp. *dekosteriana* (K. Koch) García-Mendoza of Veracruz, which is a large plant from 1 to 2.5 m tall, with large wide leaves.

Key words index: *Garrya ovata*, *Beschorneria calcicola* new reports, flora, Veracruz, Mexico.

**RESUMEN**

Se encontraron como nuevos registros para Veracruz *Garrya ovata* ssp. *goldmanii* (Wooton & Standl.) Dahling y *Beschorneria calcicola* García-Mendoza, ambas se encontraron en los cerros calizos de la zona árida veracruzana, en los alrededores de Tenex-tepec, Perote. *Garrya ovata* ssp. *goldmanii* es un arbusto pequeño que mide hasta 1.5 m de alto, contrastando considerablemente con *G. laurifolia* Benth. ssp. *laurifolia* y *G. laurifolia* Benth. ssp. *macrophylla* ya registradas de Veracruz, las cuales son arbustos o árboles de 2 a 10 m de alto. De la misma forma *Beschorneria calcicola* es una planta pequeña, rosetiforme que mide hasta 60 cm de alto, en contraste con *B. yuccoides* K. Koch ssp. *dekosteriana* (K. Koch) García-Mendoza conocida para Veracruz, que es una planta grande de 1- 2.5 m de alto, con hojas grandes y anchas.

Palabras claves: *Garrya ovata* ssp. *goldmanii*, *Beschorneria calcicola* nuevos registros, flora, Veracruz, México.

**INTRODUCTION**

During botanical explorations in the isolated xerophyll scrubs on rocky substrate of the Cofre de Perote rain-shadow region in central Veracruz we came upon a small population of *Garrya* Douglas ex Lindl. and another of *Beschorneria* Kunth. The genus *Garrya* is distributed in the New World and ranges from the Pacific Northwest of the USA through Mexico, Guatemala, the Greater Antilles and the volcanic peaks of Panama (Dahling, 1978). The genus *Beschorneria* is practically endemic to Mexico, distributed along the Sierra Madre Oriental with one species reaching into Guatemala (Galvan, 1990).

**METHOD**

Herbium vouchers of all material collected were deposited at XAL and original descriptions and keys were consulted for determinations.

**RESULTS**

On comparing *Garrya ovata* with the only species of this genus known from Veracruz, *G. laurifolia* Benth., Espejel (1983), we have come to the conclusion that the specimens collected during this expedition belong to *G. ovata* ssp. *goldmanii* (Wooton & Standl.) Dahling.

Table 1. Characteristics of *Garrya* species and their distribution in Veracruz.

SPECIES	LIFE FORM	SIZE	LEAVES	DISTRIBUTION
<i>Garrya ovata</i> ssp. <i>goldmanii</i>	Shrub	2 m	Ovate to elliptic, strongly undulated.	Mexico: Chihuahua, Coahuila. USA: New Mexico, Hedí Co., Hidalgo Co., Culberson Co., Presidio Co., Real Co.
<i>G. laurifolia</i> ssp. <i>laurifolia</i>	Shrub, tree	2-10 m	Lanceolate to elliptic.	Mexico: Aguascalientes, Chihuahua, Durango, Distrito Federal, Guanajuato, Hidalgo, Estado de México, Michoacán, Nayarit, Puebla, Oaxaca, San Luis Potosí, Veracruz and Zacatecas.
<i>G. laurifolia</i> ssp. <i>macrophylla</i>	Shrub, tree	2-10 m	Lanceolate to elliptic.	Mexico: Hidalgo, Estado de México, Nuevo León, Oaxaca, Puebla, San Luis Potosí, Tamaulipas and Veracruz.

*Garrya ovata* ssp. *goldmanii* (Wooton & Standl.) Dahling, Systematics and evolution of *Garrya*. Contributions from the Gray Herbarium No. 209: 83-84.1978. A small shrub up to 1.5 m tall; leaves sub-coriaceous glabrous on upper surface, pubescent or tomentose on lower surface; fruit glabrous, red to black at maturity. Tenex-tepec on karstic hills, municipality of Perote, Veracruz Lat. N 19E 28' Long. W 97E 17'. Elevation 2,500 - 2,600 m. 16505 G. Castillo-Campos, R.A. Palestina & J.L. Alvarez P.; 16596 G. Castillo-Campos, S. Avendaño R., R.A. Palestina & I. Acosta R. All vouchers deposited at XAL.

On comparing *Beschorneria calcicola* with the only species of this genus known from Veracruz, *B. yuccoides* subsp. *dekosteriana* (García-Mendoza & Galván, 1995) we have come to the conclusion that the specimens collected during this expedition belong to *Beschorneria calcicola* García-Mendoza. *B. yuccoides* subsp. *dekosteriana* are larger plants with much wider leaves.

*Beschorneria calcicola* Garcia-Mendoza, A. *Beschorneria calcicola* (Agavaceae) a new species from Mexico. *Herbertia* 42:28-30.1986. Medium rosetiform plant 40-60 cm tall, leaves 30-60 cm long, 0.8-1.6 cm wide at base, greyish green; inflorescence pink 120 cm long. Tenex-tepec on karstic hills, especially cliffs and escarpments, municipality of Perote, Veracruz Lat. N 19E 28' Long. W 97E 17'. Elevation 2,500 - 2,600 m: G. Castillo-Campos 1765a, 16589, 17651. All vouchers deposited at XAL.

### DISCUSSION

Both *Garrya ovata* ssp. *goldmanii* and *Beschorneria calcicola* occur in dense oak scrub with tree canopy up to 3 m tall on steep sides of narrow canyons opposite the town of Tenex-tepec. Associated with *Arenaria lycopodioides* Willd ex Schtdl., *Astrolepis*

*crassifolia* (Houlston & T. Moore) D.M. Benham & Windham, *Ceanothus caeruleus* Lag., *Coreopsis parvifolia* S.F. Blake, *Cheilanthes lendigera* (Cav.) Sw., *Galium aschenbornii* Schauer, *Gnaphalium stramineum* Kunth in H.B.K., *Nolina parvifolia* (Kunth) Hemsl., *Pinguicula moranensis* Kunth, *Polygala scoparia* Benth., *Polypodium guttatum* Maxon, *Quercus greggii* Trel., *Salvia oaxacana* Fernald., *Tillandsia benthamiana* Klotzsch ex Baker and *Verbena angustifolia* Mill.

*Beschorneria calcicola* originally described from Oaxaca is probably present also in the neighboring state of Puebla since the locality in Veracruz (Tenex-tepec) is only a few kilometers from the state border.

### CONCLUSIONS

We have found that during these explorations into the more inaccessible and often rocky zones of Veracruz unexpected findings are come upon. Especially endemics thought to have become extinct due to poor representation in herbaria owing to the absence of recent explorations, Sosa *et al.* (in press).

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