

## **Dryopetalon stenocarpum (Brassicaceae), a new species from Coahuila, Mexico**

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Source: Willdenowia, 43(1) : 121-123

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: <https://doi.org/10.3372/wi.43.43114>

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## *Dryopetalon stenocarpum* (Brassicaceae), a new species from Coahuila, Mexico

### Abstract

Al-Shehbaz I. A.: *Dryopetalon stenocarpum* (Brassicaceae), a new species from Coahuila, Mexico. – Willdenowia 43: 121–123. June 2013. – ISSN 1868-6397; © 2013 BGBM Berlin-Dahlem.  
Stable URL: <http://dx.doi.org/10.3372/wi.43.43114>

*Dryopetalon stenocarpum* is described and illustrated, and its distinguishing characters from the other species of the genus, especially *D. paysonii*, are discussed.

Additional key words: *Cruciferae*, *Schizopetaleae*, *Thelypodieae*, *Ornithocarpa*, *Schizopetalon*

*Dryopetalon* A. Gray (Brassicaceae) includes eight Mexican species two of which, *D. runcinatum* A. Gray and *D. auriculatum* (A. Gray) Al-Shehbaz, extend their ranges into southwestern United States in southern Arizona, New Mexico, and Texas (Al-Shehbaz 2007, 2012). The genus was delimited almost exclusively on having pinnatifid, lacinate, or dentate petal blades (Rollins 1941, 1993). However, a critical evaluation of morphology expanded it to include five species with entire petals (Al-Shehbaz 2007).

Schulz (1936) assigned *Dryopetalon* and two other genera, the Mexican *Ornithocarpa* Rose and Chilean-Argentinian *Schizopetalon* Sims, to the *Schizopetaleae*, a tribe he delimited solely on having divided petals. Recent molecular phylogenetic studies (Warwick & al. 2009, 2010) strongly indicated that divided petals evolved independently in the three genera and supported the placement of *Dryopetalon* in the tribe *Thelypodieae*, *Ornithocarpa* in the *Cardamineae*, and *Schizopetalon* in the *Schizopetaleae*.

The following new species of *Dryopetalon* was discovered among collections from northern Mexico recently sent for determination from Instituto Politécnico Nacional, Durango.

### *Dryopetalon stenocarpum* Al-Shehbaz, **sp. nov.**

Holotype: México, Coahuila, Mpio. Viesca, Viesca, cerca de Cañón de las Viboras, 25°14'43"N, 102°48'9"W, 1233 m, with *Larrea tridentata*, *Agave lechuguilla* and *Fouquieria splendens*, 21 Sep 2008, S. González 7473A, J. Tena, A. Vanzela, M. C. González & A. Mercado (MO; isotype: CIIDIR) – Fig. 1.

**Description** — *Herbs*, possibly annual. *Stems* 30–45 cm tall, few branched above middle, terete, solid, sparsely pilose with simple trichomes 1–2.5 mm long, moderately pubescent on younger parts. *Basal leaves* not seen; *lowermost cauline leaves* 10–20 × 3–7 cm, pinnatifid, glabrous abaxially, crisped pilose adaxially with trichomes 1–1.5 mm long; *petiole* 2–5 cm long, winged, pilose, minutely auriculate at base; *lateral leaf lobes* oblong, remotely coarsely dentate, smaller than terminal lobe; *uppermost cauline leaves* smaller, narrowly lobed. *Racemes* densely corymbose, becoming considerably elongated in fruit; *rachis* straight, sparsely pilose to subglabrous; *fruiting pedicels* 1–1.5 cm long, slender, glabrous, divaricate to ascending. *Sepals* oblong, 3.2–3.5 mm long, ascending, glabrous, equal and not saccate at base, white at broadly membranous margin;

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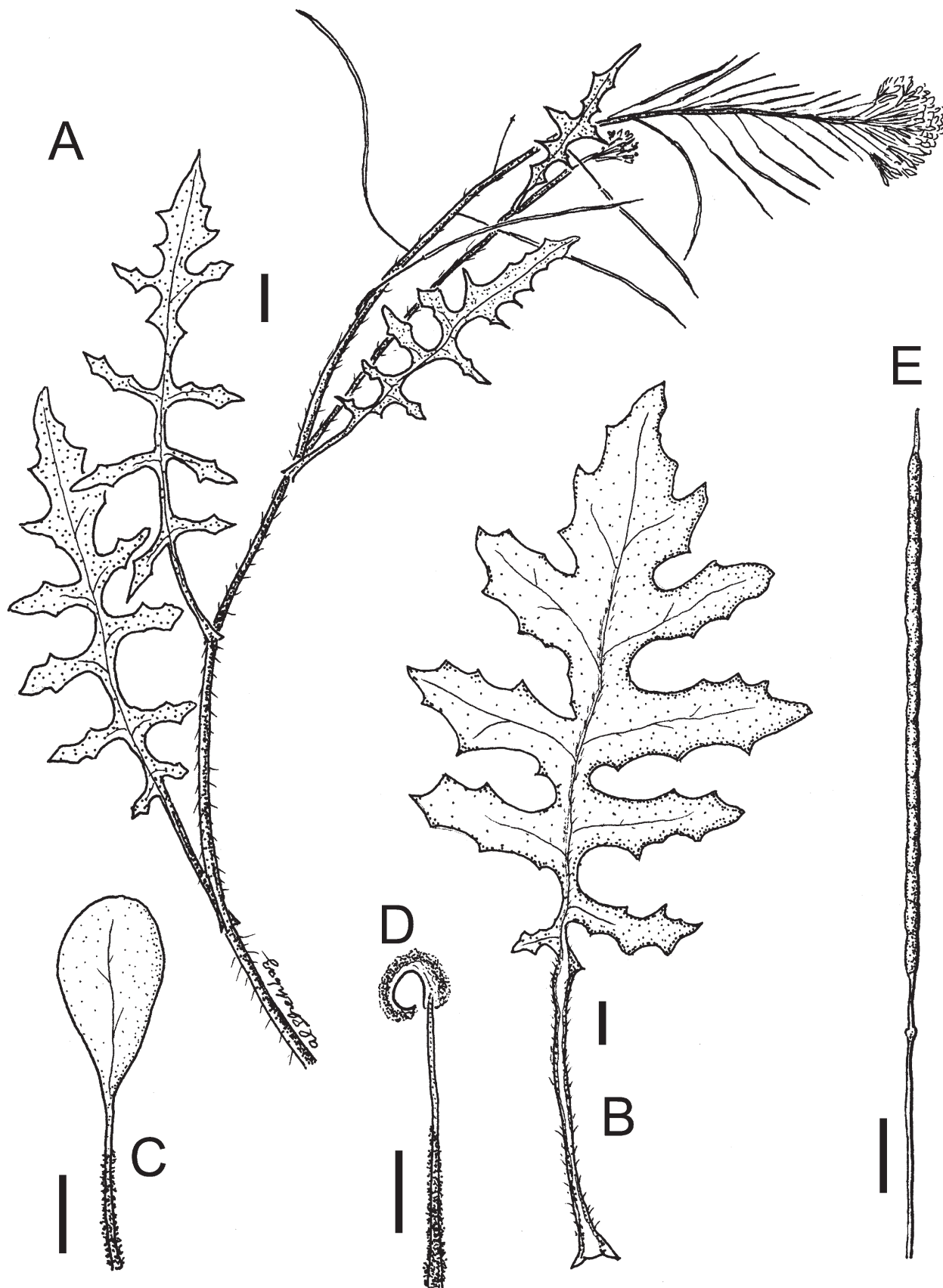


Fig. 1. *Dryopetalon stenocarpum* – A: part of plant; B: lower cauline leaf; C: petal; D: stamen; E: fruit and fruiting pedicel. – Scale bars: A–B = 1 cm, C–E = 1 mm. – Drawn from the holotype by I. Al-Shehbaz.

*petals* white, spatulate, 5–5.5 × 1–1.2 mm, ascending, margin entire, not crisped, apex rounded; *claw* well differentiated from blade, 2–2.5 mm long, minutely crisped puberulent; *stamens* white, ascending, 4–4.5 mm long, minutely crisped puberulent along proximal half; *anthers* narrowly oblong, c. 2 mm long, coiled at anthesis; *nectar glands* confluent, subtending bases of all filaments; *ovules* 50–65 per ovary. *Fruits* narrowly linear, 3.5–3.7 × 0.5–0.6 mm, torulose, glabrous, with obscure midvein; *gynophore* slender, narrower than fruit, 2.5–3 mm long; *style* slender, 2–2.5 mm long; *stigma* entire, about as wide as style. *Seeds* (immature) uniseriate, c. 1 mm long.

*Comparison with other taxa* — Four species of *Dryopetalon* have minutely puberulent petal claws and proximal parts of the staminal filaments. Two of them, *D. runcinatum* and *D. crenatum* (Brandege) Rollins, have divided petals and sessile fruits and do not appear to be closely related to *D. stenocarpum*. However, *D. paysonii* (Rollins) Al-Shehbaz, which was treated as an anomaly in *Thelypodium* Endl. (Al-Shehbaz 1973) and later placed in the monospecific *Rollinsia* Al-Shehbaz (Al-Shehbaz 1982; Rollins 1993), seems to be the nearest relative of the new species. Both have slender gynophores to 3 mm long, pinnatifid and petiolate cauline leaves, white flowers, and entire petals. *Dryopetalon stenocarpum* is readily distinguished by having torulose, terete fruits 0.5–0.6 mm wide and minutely auriculate petiolar bases of cauline leaves. By contrast, *D. paysonii* has non-torulose, latiseptate (flattened parallel to septum) fruits 1–1.8 mm wide and non-auriculate petiolar bases of cauline leaves.

## Acknowledgements

I am grateful to Dr M. Socorro González-Elizondo, director of the CIIDIR herbarium, for sending a gift of specimens for determination.

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