Brongniartia sousae (Fabaceae: Fabiodeae), a New Species from the Isthmus of Tehuantepec, Oaxaca Mexico

Oscar Dorado
Rancho Santa Ana Botanic Garden

Follow this and additional works at: https://scholarship.claremont.edu/aliso

Recommended Citation
Available at: https://scholarship.claremont.edu/aliso/vol11/iss4/17
BRONGNIARTIA SOUSAЕ (FABACEAE: FABOIDEAE), A NEW SPECIES FROM THE ISTHMUS OF TEHUANTEPEC, OAXACA, MEXICO

OSCAR DORADO
Rancho Santa Ana Botanic Garden
Claremont, California 91711

ABSTRACT

A new species, Brongniartia sousae, endemic to the region of Tehuantepec, Oaxaca, Mexico, is described and illustrated. Its affinities with B. parvijolia Rose are discussed and habitat data are given.

RESUMEN

Se describe una especie nueva, Brongniartia sousae, endémica de la región del Istmo de Tehuantepec, Oaxaca, México. Se discuten sus afinidades con B. parvijolia Rose y se proporcionan datos de su habitat.

Key words: Brongniartia, Fabaceae, Faboideae, Leguminosae, Mexico, Oaxaca, taxonomy, Tehuantepec.

INTRODUCTION

The genus Brongniartia H.B.K., of the tribe Brongniartieae (Benth.) Hutch., consists of approximately 62 species, including those recently described by McVaugh (1987), and is distributed primarily in Mexico and adjacent Central America. Only two species are known from South America, and one species is present in the United States in Texas (Arroyo 1981). In the course of a taxonomic revision of the genus begun by the author, several collections of a clearly distinct taxon have been identified. This taxon is proposed as a new species.

TAXONOMY

Brongniartia sousae O. Dorado, sp. nov. Fig. 1


A B. parvijolia stipulis caduicis, foliolis 7–15(-17), (0.4–)1.2–3.2(–3.8) cm longis, (0.3–)0.6–2.7 cm latis et apicibus mucronatis differt.

Shrub 3 m tall, with smooth, grayish bark; branches cinereous hirsutulous, becoming glabrescent at maturity with numerous whitish lenticels. Stipules 2.2–3(–4) mm long, 1–2(–3) mm wide, caducous, cinereous strigulose, elliptic to lanceolate. Leaves (3–)5–15 cm long; petiole (0.5–)0.7–1.3(–1.6) cm long, hirsutulous; rachis (0.7–)1.4–6.5(–9.2) cm long, hirsutulous; petiolules 1–3 mm long, yellowish-green; leaflets 7–15(–17) in number, (0.4–)1.2–3.2(–3.8) cm long, (0.3–)0.6–2.7 cm wide, thin, oblong or elliptical, sometimes lanceolate, narrowly oblong or oblanceolate, base rounded, cuneate or occasionally slightly subcordate, apex mucronate, rounded to acute, sometimes retuse, puberulent to glabrescent below, cine-
Fig. 1. *Brongniartia sousae* (from *Sousa 9105 et al.*).—a. Leafy shoot, scale = 2 cm.—b. Fruits, scale = 2 cm.—c. Flowering branch, scale = 1 cm.—d-i. Flower, scale = 1 cm.—d. Wing petal.—e-f. Standard.—g. Keel.—h. Androecium.—i. Gynoecium.

... hirsutulous to strigulose above, primarily along the median and secondary veins, sericeous when young, venation conspicuous above and below. Flowers axillary, solitary or paired, appearing racemose due to the tardy development of the leaves; bracteoles 5–8 mm long, 3–6(–7) mm wide, ovate, elliptic or occasionally obovate, cinereous hirsutulous to sericeous, caducous; peduncle 0.8–1.7 cm, cinereous hirsutulous, pedicels 1–2 mm, glabrous. Flowers 1.3–1.7(–2) cm...
Table 1. Comparison of diagnostic features of *Brongniartia sousae* and *B. parvifolia*.

<table>
<thead>
<tr>
<th>Character</th>
<th><em>B. sousae</em></th>
<th><em>B. parvifolia</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stipules</td>
<td>caducous</td>
<td>normally persistent</td>
</tr>
<tr>
<td>Leaflet number</td>
<td>7–15(–17)</td>
<td>(17–)19–39</td>
</tr>
<tr>
<td>Leaflet length</td>
<td>(4–)12–32(–38) mm</td>
<td>4–11 mm</td>
</tr>
<tr>
<td>Leaflet width</td>
<td>(3–)6–27 mm</td>
<td>1.5–3.5(–4.5) mm</td>
</tr>
<tr>
<td>Leaflet apex</td>
<td>mucronate</td>
<td>cuspidate</td>
</tr>
<tr>
<td>Keel claw length</td>
<td>2.5–3 mm</td>
<td>3–3.5 mm</td>
</tr>
<tr>
<td>Keel claw width</td>
<td>1 mm</td>
<td>0.8 mm</td>
</tr>
</tbody>
</table>

long; calyx 11–14(–16) mm long, campanulate, glabrous externally, glabrescent internally, tube 3.5–4.5 mm long, upper lobes 5–6(–8) mm long, united approximately % of their length, lateral lobes 7–9 mm long, lanceolate to ovate, lower lobe 6–8(–10) mm long, lanceolate; standard 1.5–1.7 cm long, 1.5–1.7 cm wide, orbicular, dark red with a greenish macula, claw 3–4 mm long, wings 1.5–1.7 cm long, 6–6.5 mm wide, spatulate, slightly auriculate in the basal portion, dark red, claw 1.5–2 mm long; keel 1.6–1.7 cm long, 6.5–7 mm wide, oblong-falcate, greenish yellow, claw 2.5–3 mm long; staminal tube 1.4–1.6 cm long, vexillary stamen free, 1.3–1.5 cm long with a staminal disk (1–1.5 mm long) surrounding the stipe of the ovary; ovary 5–7 mm long, glabrous; ovules 4–6. Legume 4.5–5.5 cm long, oblong, base attenuate, often surrounded by persistent calyx and filaments, flat, coriaceous, glabrous, apex rounded and mucronate 1.3–1.5 cm wide; seeds usually 4 per fruit, 8.5–9 mm long, 4.3–5 mm wide, 3–3.5 mm thick, oblong, smooth, yellow-brown.

**Etymology.**—Named for Mario Sousa, botanist.


**DISCUSSION**

*Brongniartia sousae* is known only from the vicinity of Tehuantepec, in low deciduous forest in association with *Apoplanesia paniculata* Presl, *Lonchocarpus emarginatus* Pittier, *L. parviflorus* Benth., and *Agave guiengola* Gentry, at altitudes of 0–450 m above sea level. Flowering and fruiting occurs from October to April.

This species resembles *Brongniartia parvifolia* Rose in the shape and color of its flowers and the shape of its bracteoles and stipules; it differs in the smaller
number of leaflets, their greater size, the normally caducous stipules, and the size of the keel claw (Table 1). In accordance with Rydberg's (1919) classification, B. sousae belongs to Parvifoliae group. Brongniartia parvifolia is the only other member of this group, which is distinguished by the presence of hirsute pubescence on the foliage.

ACKNOWLEDGMENTS

I would like to thank F. Chiang, A. Delgado, T. S. Elias, O. Téllez, R. Thorne, and J. L. Villaseñor for reviewing the manuscript. I thank S. Carlquist for his revision of the manuscript and the correction of the Latin diagnosis. I am also grateful to S. Zona and A. Liston for their invaluable help in the revision and preparation of the manuscript. I thank Mario Sousa and Leticia and Rafael Torres for providing me with excellent specimens for study. The curators of MEXU, MICH, UC, and US kindly loaned material for study.

LITERATURE CITED

