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BRONGNIARTIA SOUSAE (FABACEAE: FABOIDEAE), A NEW
SPECIES FROM THE ISTHMUS OF TEHUANTEPEC,
OAXACA, MEXICO

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ABSTRACT

A new species, *Brongniartia sousae*, endemic to the region of Tehuantepec, Oaxaca, Mexico, is described and illustrated. Its affinities with *B. parvifolia* 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. parvifolia* 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

Type. — MEXICO. OAXACA: Distrito de Tehuantepec, Municipio de Tehuantepec, 3 Febrero 1978, *M. Sousa 9105, L. Rico & O. Téllez*. (Holotype: MEXU; Isotypes: ENCB, MICH, NY, RSA, Universidad de Morelos, US, XAL).

A. B. parvifolia stipulis caducis, 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-

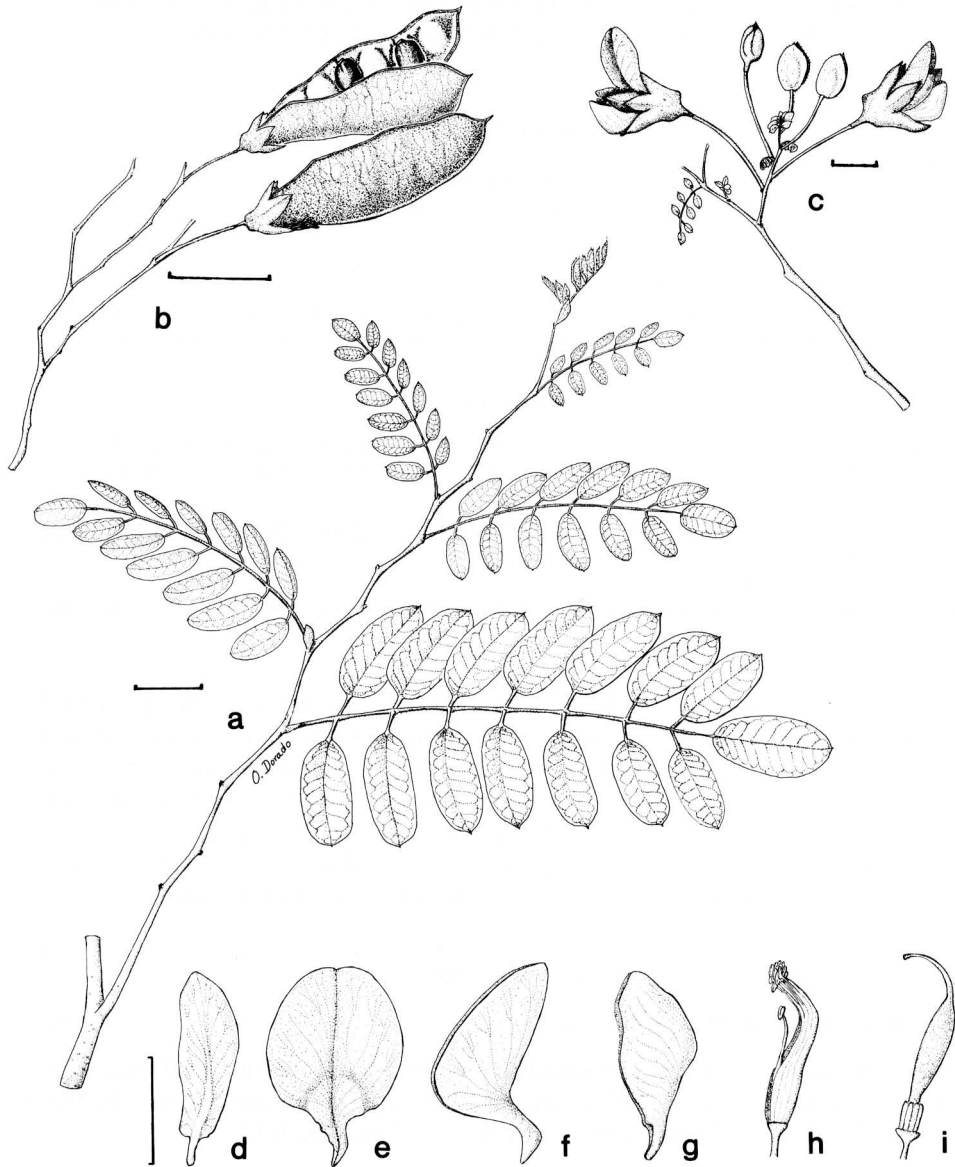


Fig. 1. *Brongniartia sousae* (from Sousa 9105 *et al.*).—a. Leafy shoot, scale = 2 cm.—b. Fruits, scale = 2 cm.—c. Flowering branch, scale = 1 cm.—d-i. Flower, scale = 1 cm.—d. Wing petal.—e-f. Standard.—g. Keel.—h. Androecium.—i. Gynoecium.

reous 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*.

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

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 $\frac{5}{6}$ 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, vexillar 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.

Additional material examined.—MEXICO. OAXACA: Municipio de Tehuantepec, Tehuantepec, Octubre de 1953, *T. Macdougall s.n.**; a 8 km al NO de Tehuantepec, Diciembre de 1978, *M. Sousa 10095, P. Basurto & L. Rico*; a 12 km al NO de Santiago Laollaga, Diciembre de 1978, *M. Sousa 10175, P. Basurto & L. Rico*; a 16 km al NO de Santiago Laollaga, Diciembre de 1978, *M. Sousa, P. Basurto & L. Rico*; a 7 km de Tehuantepec, Marzo de 1981, *M. Sousa 11939, G. Andrade, L. Cortes & T. P. Ramamoorthy*; Cerro Guiengola, 12 km a las ruinas, al N de Tehuantepec, Marzo de 1986, *L. Torres 330*, R. Torres, C. Martinez & P. Tenorio*; ladera sur del cerro Guiengola, 12 km al O de Tehuantepec, Diciembre de 1986, *O. Dorado 1628, A. Liston, & D. Arias*; ladera norte del cerro Guiengola, 12 km al O de Tehuantepec, Diciembre de 1986, *O. Dorado 1637, D. Arias & A. Liston*. All specimens deposited in MEXU and RSA (* MEXU only).

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.

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