

A NEW SPECIES OF *ORBEXILUM* (LEGUMINOSAE)
FROM CHIAPAS, MEXICO

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ABSTRACT

In his treatment of the tribe Psoraleeae for the New World, Grimes (1990) recognized 12 species of the genus *Orbexilum*, all of these confined to North America. At least one of these, *O. melanocarpum*, was broadly conceived, containing elements that are herein considered worthy of formal recognition, namely *O. oliganthum* (Brandegee) B.L. Turner, **comb. nov.** of northcentral Mexico, and *O. chiapasanum* B.L. Turner, **sp. nov.**, of Chiapas, Mexico. A discussion of their relationships is provided, along with maps showing their distributions.

KEY WORDS: Leguminosae, *Orbexilum*, Mexico

Grimes (1990) provided a systematic account of the genus *Orbexilum*. In this he recognized *O. melanocarpum* (Benth.) Rydberg as a widespread variable species of Mexico encompassing both *Psoralea oliganthum* Brandegee, and the presently described novelty, *O. chiapasanum*.

ORBEXILUM CHIAPASANUM B.L. Turner, **sp. nov.** Fig. 1

Orbexilo melanocarpo (Benth.) Rydb. similis sed differt plantis altioribus, leguminibus brevioribus (ca. 6 mm vs. 10 mm) in secco magis penbitus nigris et seminibus minoribus (ca. 3 mm vs. 6 mm).

Perennial, rhizomatous, sprawling herbs to 2 m high. **Primary stems** erect, ciliate, upwardly appressed-pubescent. **Mid-stem leaves** trifoliate; petioles 2-4 cm long; terminal leaflets ovate, 3-4 cm long, 1.5-2.5 cm wide. **Racemes** 10-15 cm long, the peduncles mostly 6-10

cm long. **Calyx** 6-7 mm long, glandular-punctate, the lobes 4-5 mm long. **Flowers** purple to violet-purple; petals 7-8 mm long, the banner purple with a white eye. **Legumes** ovoid, ca. 6 mm long, 4 mm wide; seeds ca. 3.5 mm long, 2.0 mm wide.

TYPE: **MEXICO. CHIAPAS:** Mpio. Amatenango del Valle, 1835 m, 12 Jun 1945, *E. Matuda 5821* (Holotype: LL; isotype TEX).

ADDITIONAL SPECIMENS EXAMINED: **MEXICO. CHIAPAS:** **Mpio. La Trinitaria.** E of Laguna Tziscaco, Monte Bello Natl. Park, 1300 m, 18 Nov. 1980, *Breedlove & Almeda 47547* (LL). **Mpio. Ocosingo.** 21.2 mi from the intersection with hiway 190, on road to Palenque, 11 Mar 1985, *Grimes 2620, 2628* (TEX). Mpio. Oxchuc: 5 mi ESE of Oxchuc, 6 Mar 1985, *Grimes 2619* (TEX). San Juan Cancuc, Ohteel, 5000 ft, 21 Apr 1992, *Brett 931* (TEX).

As indicated in Fig.1, *O. chiapasanum* is confined to the state of Chiapas, Mexico, hence its name. It is readily distinguished from both *O. melanocarpum* and *O. oliganthum* by its taller habit and smaller legumes having smaller seeds.

Orbexilum oliganthum (Brandege) B.L. Turner, **comb. nov.** Fig. 2
Based upon *Psoralea oligantha* Brandege, Univ. Calif. Public. Bot. 4: 179. 1911.

The type of this taxon is from the higher elevations of Sierra de Parras, southern Coahuila, Mexico. Grimes (1990), in his reduction of this taxon to synonymy under his broad concept of *O. melanocarpum*, notes:

"Some populations found above 2400 m on mountain ranges in Nuevo Leon, Coahuila and Zacatecas consist of diminutive plants usually 15 cm tall or shorter, with leaflets 3.0 cm long or less, flowers 9-10 mm long, broadly acute calyx teeth, and fruits with beak about 2.5 mm. These plants correspond to *Psoralea oligantha* Brandege. However, the character states are not unique to these mountain populations, and are not found on all populations within the same area. The broadly acute calyx teeth, perhaps the character most constant in these populations, grade into the more typical linear-triangular teeth characteristic of the species."

I cannot agree with the submergence of this taxon within *O. melanocarpum*. There appears to be a syndrome of characters which mark the species, most of which are called to the fore by Grimes. Nor do the characters concerned appear to intergrade into those of *O. melanocarpum*. Combined with its high elevational habitats, and relatively restricted distribution (Fig. 2), *O. oliganthum* appears to be worthy of recognition at the specific level.

ACKNOWLEDGMENTS

Dot maps in the present paper are based upon specimens housed at LL, TEX. I am grateful to my colleague, Guy Nesom, for the Latin diagnosis.

LITERATURE CITED

- Grimes, J.W. 1990. A revision of the New World species of Psoraleeae (Leguminosae: Papilionoideae). Mem. New York Bot. Gard. 61: 1-114.

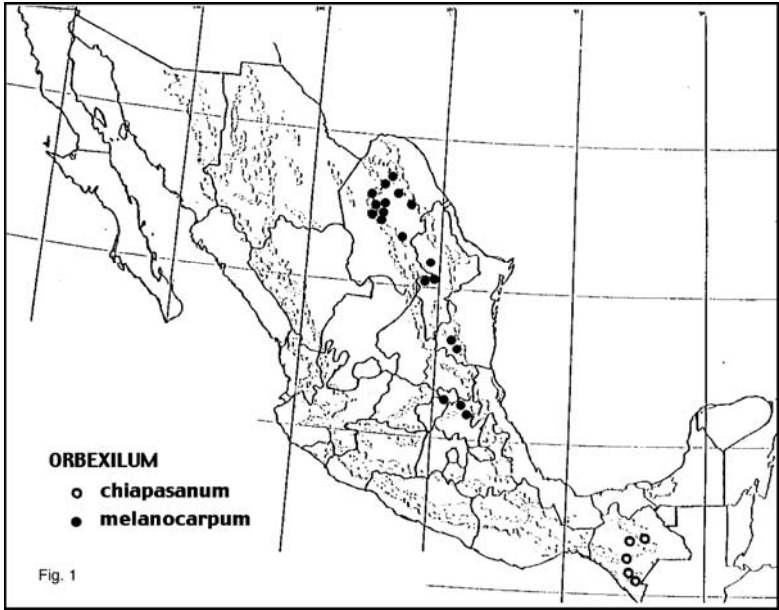


Fig. 1

Fig. 1. Distribution of *Orbexilum melanocarpum* (closed circles) and *O. chiapasanum* (open circles).

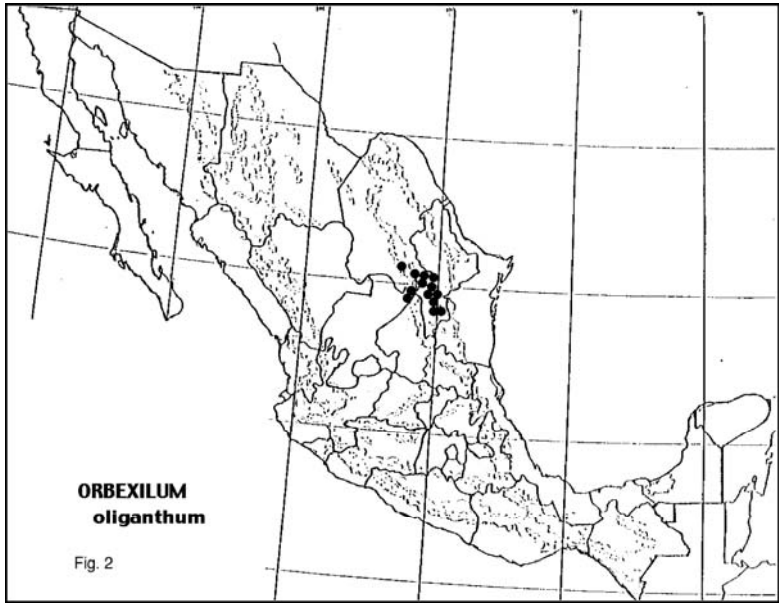


Fig. 2. Distribution of *Orbexilum oliganthum*.