ISSN 0325-3732

HICKENIA 3 San Isidro, 25 de abril de 2005 (55): 233-237

LECTOTYPIFICATION AND OCCURRENCE OF *ISOSTIGMA PEUCEDANIFOLIUM* (ASTERACEAE, HELIANTHEAE) IN BOLIVIA

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ABSTRACT: Peter, G. 2005. Lectotypification and occurrence of *Isostigma peucedanifolium* (Asteraceae, Heliantheae) in Bolivia. *Hickenia* 3(55): 233-237.

Isostigma peucedanifolium is confirmed for Bolivia (Dept. of Santa Cruz), in addition to the two species of this genus already cited for this country: *I. herzogii* and *I. hoffmannii.* The species is illustrated, its distribution is mapped and a key to differentiate the three Bolivian species is supplied.

Key words: *Isostigma, I. peucedanifolium,* Asteraceae, Heliantheae, Coreopsidinae, Bolivia.

RESUMEN: Peter, G. 2005. Lectotipificación y presencia de *Isostigma peucedanifolium* (Asteraceae, Heliantheae) en Bolivia. *Hickenia* 3(55): 233-237.

Se confirma la presencia de *Isostigma peucedanifolium* para Bolivia (Dpto. Santa Cruz). Ésta se agrega a las dos especies del género ya citadas para este país: *I. herzogii* e *I. hoffmannii*. La especie se ilustra, y se proveen un mapa de distribución y una clave para diferenciar las entidades bolivianas del género.

Palabras clave: *Isostigma, I. peucedanifolium,* Asteraceae, Heliantheae, Coreopsidinae, Bolivia.

INTRODUCTION

In the course of the revision of the genus *Isostigma* (Asteraceae, Heliantheae, Coreopsidinae), material of *I. peucedanifolium* (Spreng.) Less. from the Department of Santa Cruz, in Bolivia was found. This species had been cited for Argentina, Brazil, Paraguay, and Uruguay, and it had been included in advance in a database in Internet (http://mobot. mobot. org/W3T/Search/vast.html) for Bolivia. Therefore, in the present work the occurrence of this species in Bolivia is confirmed, and the western boundary of the species distribution is extended from 59ºW to 60º50'W.

In 1826 Sprengel described *Tragoceras peucedanifolium*. Some years later, Lessing (1831) published the genus *Isostigma,* transferring Sprengel's species as the type of *Isostigma* with the combination *Isostigma peucedanifolium.*

In previous works (Hassler, 1909; Sherff, 1926; Cabrera, 1974; Sáenz, 1999) two species of *Isostigma* had been mentioned for Bolivia: *I. herzogii* and *I. hoffmannii*. Therefore, it is the third species of this genus reported for the country.

Isostigma peucedanifolium (Spreng.) Less., Linnaea 6: 514. 1831. *Tragoceras peucedanifolium* Spreng., Syst. Veg. 3: 576. 1826. ("*Tragoceros*"). TYPE: "Brazilia, *Sellow s.n.*, ex Herb. Reg. Berolinense 1859" (lectotype here designated: K, not seen, photography in BBB). Fig. 1.

Common names: "cravo do campo" in Brazil (São Paulo), "sandades do campo" in Brazil (São Paulo), "clavel del campo" in Argentina (Misiones).

Phenology: flowering from August to May.

Geographic distribution and habitat: Southern Brazil (States of Goiás, Mato Grosso, Minas Gerais, Paraná, Rio Grande do Sul and São Paulo), Southern Paraguay (Departments of Itapúa and Misiones), Eastern Bolivia (Department of Santa Cruz), Northern Uruguay (Department of Artigas), and Eastern Argentina (Provinces of Corrientes and Misiones). Fig. 2.

Isostigma peucedanifolium inhabits dry, high, infertile, and burned places, in lateritic, sandy, clay-sandy, gravelly and rocky soils, at altitudes between 30-1050 m. It grows in small populations in savannas, grasslands, campos rupestres, open cerrado fields with low subshrubs or trees, on the banks of gallery forest, palm groves of Yatay-pony [*Butia yatay* (Mart.) Becc.], fields grazed by cattle, gentle slopes, sandy and fixed dunes, valley slopes, high edge of brooks, sandy ravine of rivers, and uplands. It may be occasional, infrequent, locally frequent or abundant.

Observations: *Isostigma peucedanifolium* (Spreng.) Less. var. *genuinum* Hassl., Feddes Repert. Spec. Nov. Regni Veg. 14: 277. 1916, is a name not validly published according to the Art. 24.3 of the International Code of Botanical Nomenclature; it corresponds with the species treated here.

During his revision of *Isostigma*, Sherff (1926) considered *Bidens megapotamica* Spreng. as a synonym of *I. peucedanifolium* due to his misinterpretation of the type material of *B. megapotamica*. At that time the combination *Isostigma megapotamicum* (Spreng.) Sherff was published, but later, Sherff (1927) mentioned that Blake (in litt.) had found the type of *Bidens megapotamica* at P, and identifed it as *Thelesperma scabiosoides*. Consequently, Sherff (1927) reduced *T. scabiosoides* to a synonym of *T. megapotamicum* (Spreng.) Kuntze and considered *Isostigma peucedanifolium* the valid name for the species treated here.

This species has a sweet scent, similar to that of carnations.

Isostigma peucedanifolium, along with the rest of the genus, has Kranz syndrome. This is recognized to be of taxonomic importance, and a new type of Kranz anatomy present in some species of *Isostigma* has been described for the Asteraceae (Peter & Katinas, 2003).

Isostigma peucedanifolium is closely related to *I. crithmifolium* Less. and *I. speciosum* Less. The former can be differentiated from *I. crithmifolium* by its filiform leaflets, up to 0.7 mm wide (vs. linear leaflets, up to 3 mm wide) and from *I. speciosum* by its non-expanded stems at the base of the capitulum (vs. stems up to 7 mm wide) and its possessing less than 10 bracteoles per stem (vs. more than 20).

Observations about the type material: Neither Sprengel nor Lessing cited the collection number or data from Sellow's type material. The original material of *Sellow* was deposited at B (Sherff, 1926: 253), and has been destroyed (Starc, com. pers.). There exists a specimen collected by *Sellow*, without number, deposited at K, which is probably a duplicate of the original specimen at B. There-

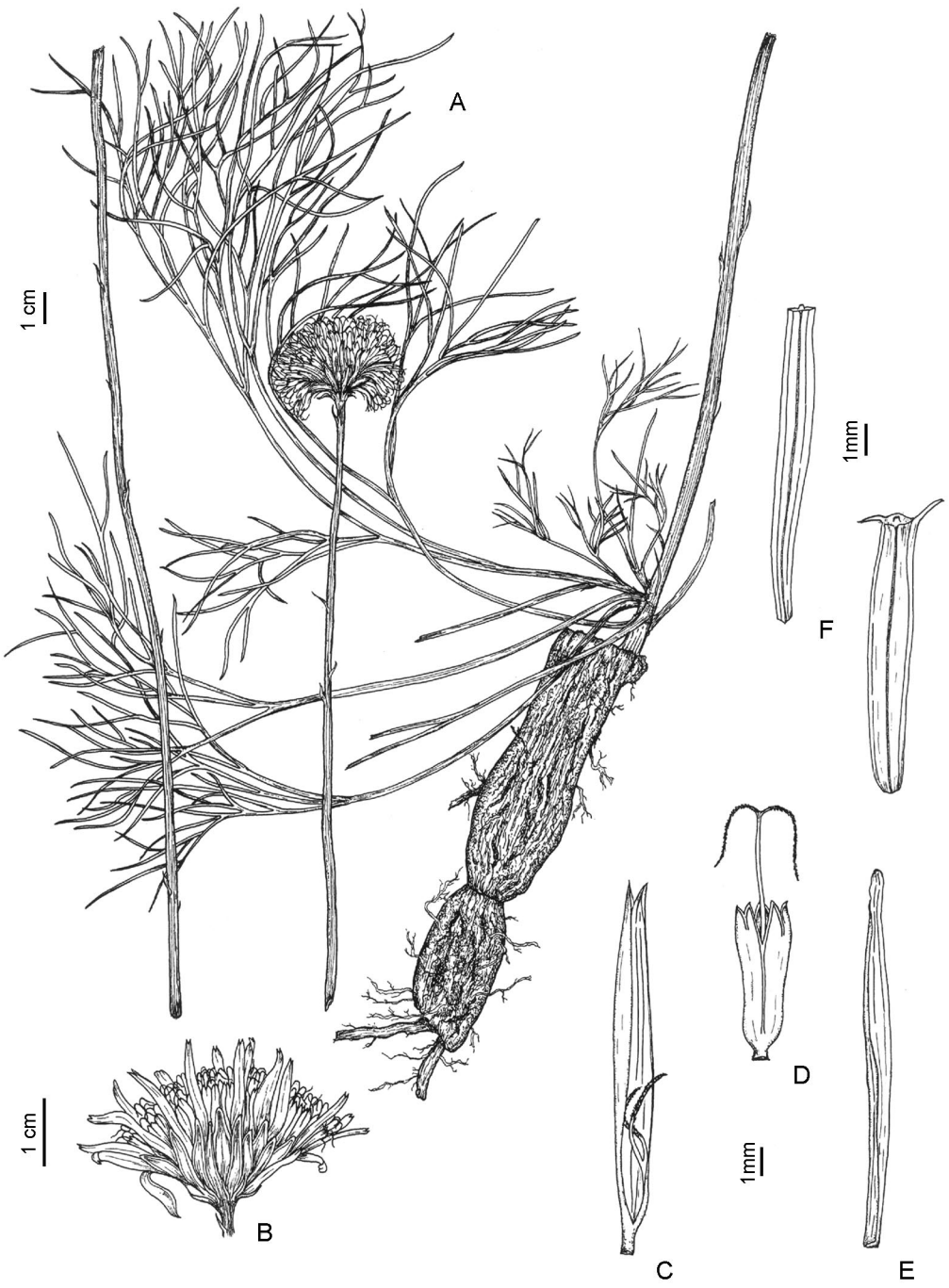

Fig. 1. *Isostigma peucedanifolium*. A: plant. B: capitulum. C: marginal flower. D: disc flower. E: paleae. F: cypselas (A, *Arbo, Cáceres & Maruñak 6966*, CTES; B, *Campos 131*, SP; C-F, *Pirani 1305*, SPF).

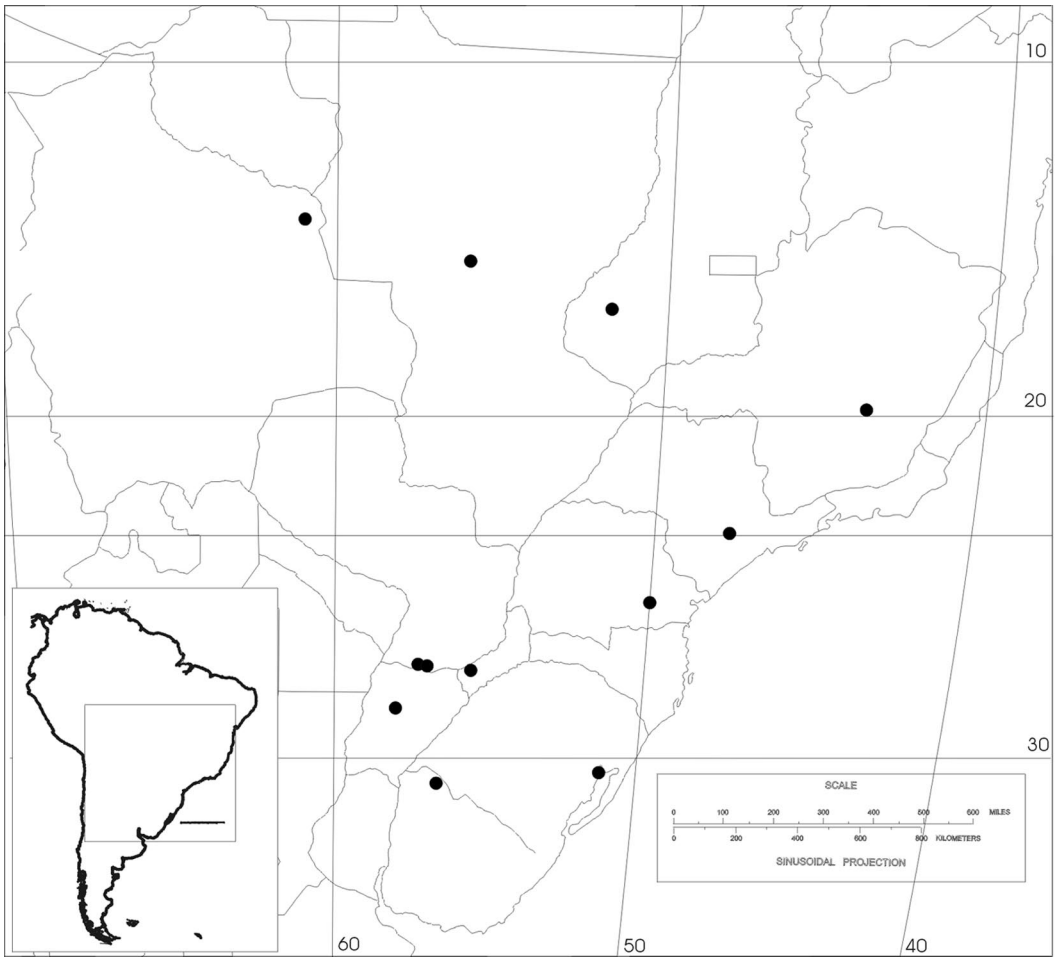

Fig. 2. Map showing the distribution of *Isostigma peucedanifolium.*

fore, I consider this specimen as the lectotype.

Examined material

BOLIVIA. **Santa Cruz.** Velasco, Parque Nacional Noel Kempff Mercado, Las Gamas, 14º40'S, 60º46'W, 10.XI.1993, *Saldías & Arroyo 3545* (MO).

Additional examined material

ARGENTINA. **Corrientes.** *Dpto. Concepción:* Cerro Puitá, 14 km al E de la ruta, 28º35'S, 58º04'W, Ea. Tranquera de Hierro, 66 km al NE de Chavarría, camino a Concepción, 3.XII.1996, *Arbo, Cáceres & Maruñak 6966* (CTES). **Misiones.** *Dpto. San Ignacio:* San Ignacio, 8 km camino al Parque Provincial Teyú-Cuaré, en el desvío al paraje El Payal, 27º16'S, 55º33'W, 19.IV.1997, *Morrone, Deginani & Múlgura 1869* (MO).

BRAZIL. **Goiás.** Serra do Caiapó, 50 km al S de Caiaponia on road to Jataí, 17º12'S, 51º47'W, 26.X.1964, *Irwin & Soderstrom 7366* (NY, OS, US). **Mato Grosso.** Chapada dos Guimarães, Cachoeira Véu de Noiva, do Rio Coxipozinho, 15º30'S, 55º45'W, 21.X.1985, *Pirani 1305* (F, MO, NY, SPF, US). **Minas Gerais.** Caeté, Fazenda Geriza, 19º57'S, 43º42'W, 8.X.1961, *Felippe 30* (BBB, NY). **Paraná.** Rio Tibagi at Rodovia do Café, 25º18'S, 50º00'W, 21.I.1965, *Smith & Klein 14923* (LP, NY, US). **Rio Grande do Sul.** Guaiba, Faz. S. Maximiano, BR-116, km 307, 27.XI.1990,

Matzenbacher s/n (F 2078134). **São Paulo.** Itapetininga, Fazenda Bom Retiro, SW da cid. de Itapetininga, próximo ao rio Paranapanema, 25.XI.1959, *Machado de Campos 131* (NY, SP).

PARAGUAY. **Itapúa.** Isla Yacyretá, 27º26'S, 56º45'W, 21.I.1997, *Zardini & Villate 46384* (US). **Misiones.** Ayolas, 56º50'W, 27º25'S, 2.II.1988, *Schinini & Vanni 25954* (CTES).

URUGUAY. **Artigas.** Artigas, junto al río Cuareim, I.1936, *Chebataroff 1998* (LP).

Key to the Bolivian species of *Isostigma*

1. Capitula in pseudocorymbs. Leaf blades entire, linear to narrowly ovate. Marginal flowers inconspicuous ..... *I. herzogii*
1. Capitula solitary. Leaf blades partite. Marginal flowers conspicuous 2

2(1). Leaves distributed along the stem. Stem decumbent, leafy at the low part, and scapiform at the superior one. Leaflets obovate. Cypselas hispid on the margins, apex and ribs ..... *I. hoffmannii*
2 . Leaves rosulate. Stem erect, slightly bracteolate. Leaflets subulate or filiform. Cypselas glabrous ..... *I. peucedanifolium*

ACKNOWLEDGMENTS

I thank Dr. Liliana Katinas and Dr. Carlos Villamil for critical reading of the manuscript. Curators of herbaria for loan of specimens and Marcela Scarlatto for inking Fig. 1 are also acknowledged. This work was supported by the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), and the Universidad Nacional del Sur (UNS).

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Original recibido el 30 de Mayo de 2004; aceptado el 21 de Septiembre de 2004.

Hickenia agradece a los siguientes revisores de los artículos publicados en la presente entrega del volumen 3:

Prof. Nélida M. Bacigalupo (Instituto de Botánica Darwinion, Argentina)
Dr. Daniel Cabral (Universidad de Buenos Aires, Argentina)
Ing. Agr. Renée Fortunato (Instituto Nacional de Tecnología Agropecuaria, Argentina)
Dra. Susana Freire (Universidad de La Plata, Argentina)
Dra. Gabriela E. Giudice (Universidad de La Plata, Argentina)
Prof. E. Rosa Guaglianone (Instituto de Botánica Darwinion, Argentina)
Dr. Clodomiro Marticorena (Universidad de Chile, Concepción, Chile)
Dr. Jefferson Prado (Instituto de Botánica, San Pablo, Brasil)
Dra. Andrea I. Romero (Universidad de Buenos Aires, Argentina)
Dra. Janice Saunders (Instituto de Botánica Darwinion, Argentina)
Dr. Fernando O. Zuloaga (Instituto de Botánica Darwinion, Argentina)