



## A new name and considerations on *Spigelia multispica* Steud. and its varieties

DANIELA C. ZAPPI<sup>1</sup>

<sup>1</sup>Jardim Botânico do Rio de Janeiro, Rua Pacheco Leão 915, 22460-030, Rio de Janeiro, RJ, Brazil, [danielazappi14@gmail.com](mailto:danielazappi14@gmail.com)

Upon examining material of Loganiaceae for the Brazilian state of Pará, available specimens of *Spigelia multispica* Steud. were reassessed. In the process, this name and one heterotypic variety were confirmed as synonyms of the older name *Spigelia hamellioides* Kunth, which had not previously been reported from Brazil, whereas a new name, *Spigelia spruceana* Zappi, is proposed for *Spigelia multispica* var. *angustifolia* Progel.

Durante estudos da família Loganiaceae no Pará, houve a oportunidade de revisar os espécimes atribuídos a *Spigelia multispica* Steud., que foi sinonimizado, juntamente com uma de suas variedades heterotípicas, a um nome mais antigo, *Spigelia hamellioides* Kunth, que ainda não havia sido referida para o Brasil. No entanto, a outra variedade heterotípica, *Spigelia multispica* var. *angustifolia* Progel., foi elevada à categoria de espécie, recebendo um novo nome, *Spigelia spruceana* Zappi.

**Key words:** Brazilian Flora, Pará, nomenclature, *Spigelia hamellioides*, *Spigelia spruceana*, synonymy, taxonom

### Introduction

The present adjustments to the taxonomy and nomenclature of *Spigelia* Linnaeus (1753: 149) in the Amazonian region were prompted by involvement in a project that investigates the flora that grows on iron-stone in the Serra dos Carajás (Pará, Brazil), for which the account of the Loganiaceae is being prepared. This Neotropical genus is much less diverse in Amazonia than in eastern Brazil (Zappi 2006) and, according to the Brazilian Flora Group (BFG 2015), only has four species in the state of Pará. The present study adds two additional species to this state's records.

Steudel (1843) described *Spigelia multispica* (based on material collected in Suriname [in sylvis distr. Para, Aug. 1842, *Hostmann & Kappler* 851a (G, S)]. In his treatment for Flora Brasiliensis, Progel (1868) recognized infraspecific taxa classified as varieties  $\alpha$ ,  $\beta$  and  $\gamma$ . He attributed to *Spigelia multispica* “var.  $\alpha$  *concolor*” Progel (1868: 263) several specimens from Brazil [Pará, St. Anna, *Burchell* 9306 (n.f.), l.c. 9307 (K000573349)] alongside of the type material of *S. multispica* from Suriname [*Hostmann & Kappler* 851a (P, G), and *Wulfschlägel* 328, 330 (BR)], therefore variety  $\alpha$  *concolor* represents the typical variety and is a superfluous name (ICBN Art. 52.1, McNeill *et al.* 2012). It may be understood from Progel's treatment of other species in the same publication (e.g. *S. laurina* Cham. & Schldl. var.  $\beta$  *latifolia* Progel (1868: 264); *S. anthelmia* L. var.  $\beta$  *nervosa* Progel (1868: 262) and many others throughout his work), that he often added variety  $\beta$  without a prior variety  $\alpha$ .

Apart from the typical variety, Progel (1868) described *Spigelia multispica* “var.  $\beta$  *discolor*” Progel (1868: 263), citing a single specimen from French Guiana [July 1825, *Poiteau* s.n. (K)], that was synonymized under *Spigelia anthelmia* Linnaeus (1753: 149) by Leeuwenberg (1961). Studying the type of *S. multispica* var. *discolor*, it became obvious that the leaves are oblong or ovate and lack the obvious basal veins and the sparsely branched, hollow stems that are characteristic of *S. anthelmia*, which has lanceolate leaves that are strongly veined from the base. *S. multispica* is here synonymized under *S. hamellioides* Kunth (1819: 185) (the older name currently used for *S. multispica* (Gould 1997, Sousa Sánchez 2007).

Progel's “third” variety, “var.  $\gamma$  *angustifolia*” (Progel 1868: 263) was typified by a collection made in Pará, [Rio] Caripi, Aug. 1849, *Spruce* 120 (K). Specimens originating from a single collection event are represented in K, P and TCD. All of these have clear nodes and appear articulated from the base, bearing much shorter internodes than either *S. hamellioides* or *S. anthelmia*, have a more compact habit, narrower leaves with acuminate apex and shorter and single inflorescences. It was concluded that *S. multispica* var. *angustifolia* is not conspecific with *S. multispica* (= *S. hamellioides*) and a new name is proposed for it.

***Spigelia spruceana* Zappi nom. nov.** Replaced synonym: *S. multispica* Steud. var. *angustifolia* Progel (1868: 263) **non** *S. angustifolia* W. Klett **nom. nud.** Lectotype (designated here): Brazil, Pará, [Rio] Caripi, VIII.1849, *Spruce* 120, fl., fr. (K001062190, isolectotypes K000573350, P00507642, TCD0006550).

Fig. 1.



FIGURE 1. Lectotype of *Spigelia spruceana* Zappi deposited at K. © The Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with the consent of the Royal Botanic Gardens, Kew.

Herb 30-40 cm tall, regularly branched, flowering when reaches 10 or more nodes, completely glabrous. Leaves verticillate at apex (upper nodes), petiole 3-5 mm; leaf-blade narrowly lanceolate, (3-)4-6 x (0.6-)1-1.3 cm, chartaceous, drying dark-olive green to brown above, yellowish-brown below, base acute, apex long acuminate, secondary veins 4-5 pairs, ascending, only visible beneath. Apical inflorescence solitary, erect to apically flexed, 5-8 cm long, peduncle 8 mm, 18-20-flowered, flowers 6-8 mm apart half the way up the inflorescence. Flowers 8-10 mm long, calyx-lobes 3-4 mm long, narrow, flexuose, acute; corolla white to pinkish, membranaceous, tube cylindrical, lobes triangular, sub-erect. Capsules 4-4.5 x 5.5-6 mm, each half globose to almost cone-shaped, muciculate at apex; seeds pale-brown, minutely verrucose, subglobose to kidney-shaped, 1-1.2 mm long.

Conservation Assessment:—DD. This distinct species is known from a single collection made in the state of Pará in 1849 and unfortunately was not located again.

### Synonymy adjustments in *Spigelia*

Full synonymy and typification for names subsumed under *Spigelia hamellioides*, a new occurrence for Brazil, are provided below, while *S. sessilifolia* Rusby (1898: 543), previously attributed to *S. hamellioides*, is now synonymized under *S. flemmingiana* Chamisso & Schlechtendal (1826: 203). The relevant lectotypes are also designated. The spelling of *S. hamellioides* (vs. *hamelioides*) has been maintained following Art. 60 of the ICBN (McNeill *et al.* 2012).

***S. hamellioides*** Kunth in Humboldt, Bonpland & Kunth (1819: 185). Lectotype (designated here): Colombia, prope Guaduas Novo-Granatensium, *Bonpland & Humboldt* s.n. (P00670862, isolectotype P00506413).

*S. multispica* Steudel (1843: 764). Lectotype (designated here): Suriname, in sylvis distr. Pará, VIII.1842, *Hostmann & Kappler* 851a P00507680, isolectotypes: G00368321, MO-694152, S-R-5848).

*S. multispica* var. *discolor* Progel (1868: 263). Lectotype (designated here): French Guiana, *Poiteau* (K000573348), **syn. nov.**

*S. multispica* var. *concolor* Progel (1868: 263) **nom. illeg.** (ICBN art. 52.1) based on the type of *S. multispica* Steud.

*S. laevigata* Progel (1868: 263). Lectotype (designated here): French Guiana, Cayenne, *Martin* s.n. (K000573351), **syn. nov.**

*S. filipes* Rusby (1920: 81). Lectotype (designated here): Venezuela, Lower Orinoco, Eleanor Creek, V.1896, *H.H. Rusby & R.W. Squires* 145 (NY00297394; isolectotype- K000573334, BM000757838).

*S. killipii* Ewan (1947: 302). 1947. Holotype: Colombia, Int. El Chocó. Dense forest near junction of Rio Condato and Rio San Juan, 100-150m, 20.IV.1933, *E.P. Killip* 35101 (US00112915, isotype US00901886, BM000757855).

*S. persicarioides* Ewan var. *insularis* Ewan (1947: 302). Holotype: Colombia, Dept. Nariño, South end of Gorgona Island, 9.II.1939, *E.P. Killip & H. Garcia* 33105 (US00112921, iso-. BC, BM, US00930981).

Brazilian records for this species:—**Pará:** ‘St. Anna’ [Ilha do Bananal], *Burchell* 9306 (n.f.), l.c. 9307 (K000573349); Lageira, airstrip on Rio Maicuru, 0°55’00”S, 54°25’59”W, 17.V.1981, *J.J. Strudwick* 3189 (NY); Abaetetuba, Comunidade Rio Urubueua de Fátima, 1°37’09”S, 48°58’34”W, 27.V.2012, *P.H.B. Moura* 01 (MFS); l.c., Vila de Beja, 1°37’08”S, 48°48’45”W, 16.III.2002, *A.S.L. Silva et al.* 3532 (SP). **Maranhão:** Maracassumé River, Cachoeira, 31.XI.1932, *L. Fróes* 2010 (K, NY);

A species with wide geographic distribution in northern South and Central America, *Spigelia hamellioides* was first described for Colombia, and nowadays includes some of the taxa listed by Ewan (1947) in his treatment of the genus.

Distribution:—Amazonian Brazil, French Guiana, Guyana, Suriname, Venezuela, Colombia, Ecuador, Peru, Costa Rica, Panamá.

According to by Jørgensen *et al.* (2015), *S. sessilifolia* Rusby is a synonym of *S. hamellioides* Kunth, however, close examination of the type specimens revealed that the spikes with flowers inserted close together and the straight, short calyx limb bear strong resemblance with the features found in *S. flemmingiana*, leading to a change in synonymization (below).

***S. flemmingiana*** Chamisso & Schlechtendal (1826: 203). Lectotype (designated here): Brazil, *Sellow* (P00506405, isolectotype HAL, K000573373).

*S. sessilifolia* Rusby (1898: 543). Lectotype (designated here): Bolivia, Mapiri, 5000 ft, VI.1885, *Rusby* 1426 (NY00297398, isolectotype MICH, NY00297399, NY00297400, US), **syn. nov.**

Distribution:—Northern and Eastern Brazil, Bolivia, Guiana and French Guiana and possibly occurring in Venezuela.

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