

# Notes on *Spigelia* (*Strychnaceae*), 28

Francisco Javier FERNÁNDEZ CASAS

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## Notes on *Spigelia* (*Strychnaceae*), 28

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**Keywords.** Systematics, new species, chorology, *Spigelia* (*Strychnaceae*), Brazil (Rond nia).

**Abstract.** Scattered notes about the genus *Spigelia* (*Strychnaceae*). A new species is proposed: *S. rondoniensis* from Brazil (Rond nia).

**Zusammenfassung.** Einige lose Anmerkungen  ber die Gattung *Spigelia* (*Strychnaceae*). Es wird hier eine neue Art aus Brasil: *S. rondoniensis* (aus Rond nia) beschrieben.

**Resum .** Notes peu connexes sur le genre *Spigelia* (*Strychnaceae*). Une nouvelle esp ce est d crite, du Br sil: *S. rondoniensis* de Rond nia.

**Resumo.** Notas avulsas sobre o g nero *Spigelia* (*Strychnaceae*). Descreve-se uma nova esp cie, brasileiras: *S. rondoniensis*, de Rond nia.

**Resumen.** Notas sueltas sobre el g nero *Spigelia* (*Strychnaceae*). Se describe una especie nueva: *S. rondoniensis*, de Brasil (Rond nia).

This article continues –in its title, topic and style of exposition– whose most recent contribution has been published in the current year, cf. F. J. FERN NDEZ CASAS (2001, 2006). The series brings together and throws light on miscellaneous notes concerning the genus *Spigelia* Linnaeus, of the family *Strychnaceae* De Candolle ex Perleb, Vers. *Artzneikr. Pfl.*: 244. (v-1818), “*Strychnea*”, or better still *Spigeliaceae* Martius, Nov. gen. sp. pl. 2: 124, 131, 132 (i/vi-1827).

A new species is described from the state of Rond nia, which was discovered during the study of the collections of the herbarium IAN (Bel m do Par ). These collections were kindly made available to us by the staff of that Institution at the beginning of 2006, during our visit to that country. These lines serve to express our gratitude for the facilities that were offered to us.

28 ***Spigelia rondoniensis*** Fern ndez Casas, **spec. nov.**, *Fontqueria* 55(44): 337-342, n  28 (02-xii-2006)

TYPUS: *G. A. Black 52-15055* & *E. Cordeiro*, 18-VI-1952 (IAN 75702, holo-)

– Subg. *Spigelia* (autonymus), sect. I.V *Stenophyllae* Progel in A. W. Eichler & I. Urban, *Fl. bras.* 6(1): col. 258, sect. iv (1868)

DISTR. GEOGR. **America australis:** Brasil (Rond nia); cf. tabula 1 (pagella 341).

ILLUSTR.: *Laminae nostrae* i (pagella 339), ii (pagella 340).

ABBREVIATA DIAGNOSIS vel character essentialis

Aliquo modo ad *Spigeliam Martianam* accedens. Plantis tenuioribus, capsulis minoribus (3 × 4 mm vice 4 × 6 mm), quam sepalis longioribus, metastylis longioribus (ad 3 mm vice ad 0,7-1,5[-2] mm), flexuosis nec rigidis, praecipue differt.

MAIN DIAGNOSTIC FEATURES or diagnostic characters

Very similar to *Spigelia Martiana*; but our species is a more delicate plant, with smaller capsules ( $3 \times 4$  mm instead of  $4 \times 6$  mm), longer than the sepals, with metastyle longer (0,7-1,5[-2] mm instead of ca. 3 mm), flexuose, not rigid.

#### DESCRIPTIO latina

Sicut collectorum schedula annua, flores rubri.

*Herbacea* usque 30 cm alta, hemicryptophyta?. *Caules* horizontales, cylindrici, ad basim radicantes; erecti, ascendentes, parum ramificati. *Rami* modice quadrangulati vel subalati. *Internodia* quam folia semper longiora.

*FOLIA* margine denticulato excepto glaberrima, omnia opposita nec pseudoverticillata, suprema longiora quam media et inferiora. *Stipulae* ignotae, non visae. *Petiolus* brevissimus, si adest. *Limbus* stricte lanceolatus, usque  $30(-40) \times 3-4$  mm; *nervium medium* longitudinale supra aequante, subtus eminente; *nervia secundaria* inconspicua. *Margo* strictus, revolutus, minutissime antrorse hyalino dentatus.

*INFLORESCENTIAE* terminales, 1-2, elongatae, 1-3 cm pedunculatae, usque 28 floribus secundis. *Axis* angulatus vel subalatus. *Bractea* 1-1,5 mm, lanceolata, sepalis similimae sed minores; marginibus antrorse denticulatis.

*FLORES* turbinati, anthesi  $11-13 \times 4-5$  mm. *Pedunculi* usque 3 mm. *Calyx* ad 2,5 mm, 0,5 mm connatus; *sepala* lanceolata, ecarinata, albo marginata; *margo* dentibus antrorse hialinis distantibus praeditus. *Corolla* rubra, turbinata, in alabastris supra longitudinaliter plicata. *Filamenta* quinque, usque ad dimidium tobo connata, apice curvata; ad basim pars libera radialiter dilatata, lateraliter complanata. *Antherae* ad 1,7 mm, sagittatae, ad basim dorsifixae, inclusae, introrsae. *Ovarium* subsphaericum vel parum conicum, glabrum. *Stylus* cylindricus, strictus, quam filamentum longior. *Stigma* ad 1 mm, papillosum, quam stylus ad basim parum latior, stricte conicum, obtusum; inter antheras exstans.

*CAPSULA* ad  $3 \times 4 \times 2$  mm, quam sepala longior; *sutura* carpelaris bene notata. *Pericarpium* omnino laeve. *Metastylus* ad 3 mm longus, interdum parum flexuosus. *Carpoatlas* (mihi integer ignotus est, phragmenta tantum visa) rhombico navicularis, albidus, ad  $3 \times 2$  mm. *Granatum* quatuorseminatum; unum vidi monospermum.

*SEMINA* variabilia, formae truncato pyramidales frequentiores quam cuneato sphaericae. *Testa* omnino verrucosa. *Dorso* celulis duplo latis quam longis, strias transversas delineant. *Pleurae* quam dorsum verrucosiores, cellulis plus minusve isodiametricis.

#### REGARDING THE ETYMOLOGY AND ORTHOEPY of the specific name

*Rondoniense* is paroxytone [rondoni nsis]: it refers to the Latinised name for the people and things of the state Rond nia. It means "native of Rond nia"; in Brazilian Portuguese it would indicate that *rondoniense* is "adjetivo p rio rondoniano", cf. C. FERREIRA DA CUNHA & L. F. LINDLEY CINTRA (2003: 248-249). In turn, the state of Rond nia, established on the old Federal Territory of the Guapor  River, takes its name from the Marshal C ndido Rondon (1865-1958), who established the telegraphic network in its territory.

#### ENGLISH DESCRIPTION

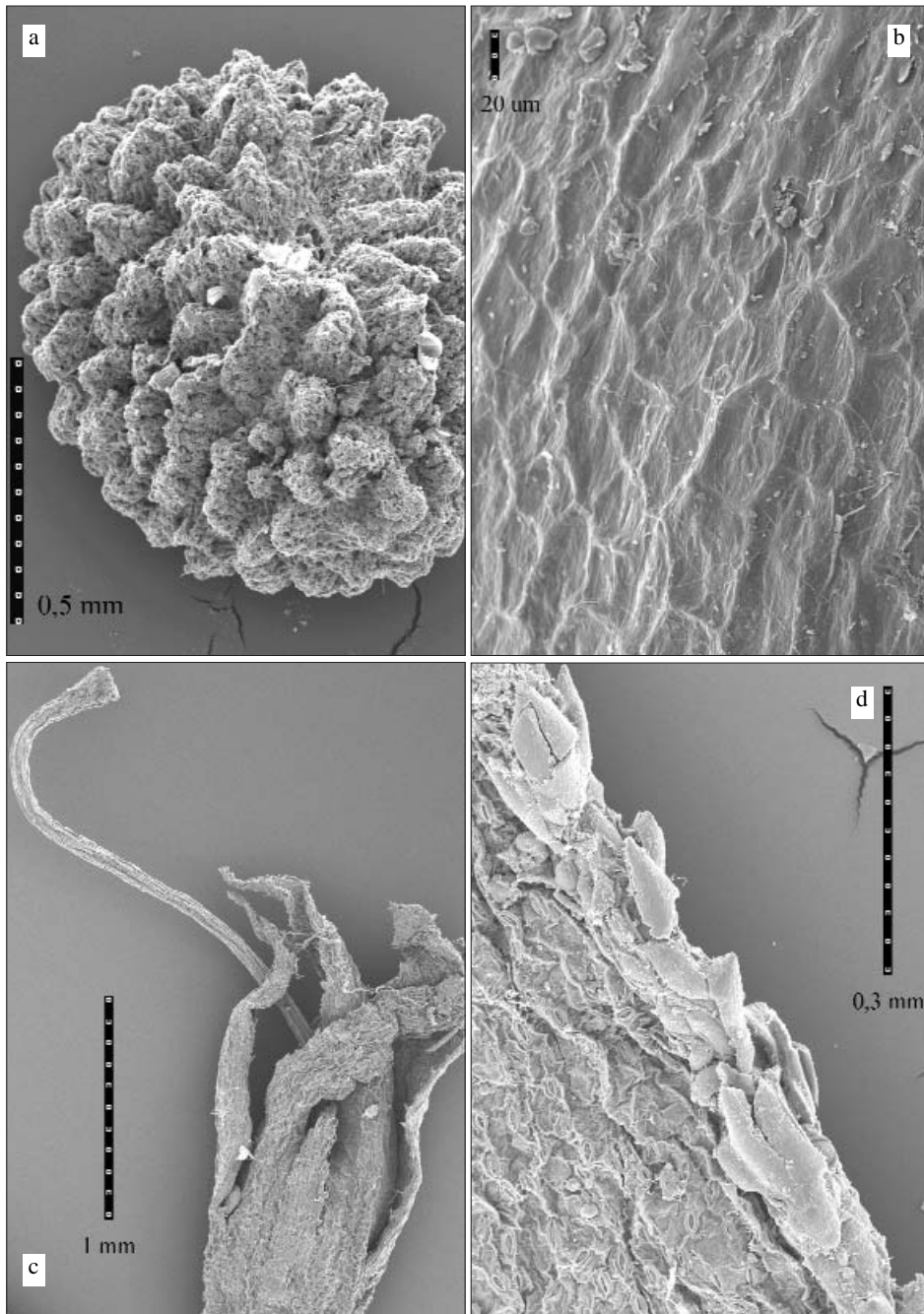
According to the collectors' label, it is an annual plant with red flowers

*Herbaceous* of up to 30 cm, apparently a hemicryptophyte. *Stems* prostrate and rooted at the base, cylindrical; upward stems erect, little ramified. *Branches* smooth 4-angles or subalate. *Internodes* constantly longer than the leaves.

*LEAVES* quite glabrous, except in the margin, all opposed, never pseudoverticillate, the upper ones longer than the middle or the lower ones. *Stipules* not known, not studied.



Plate I. *Spigelia rondoniensis* Fernández Casas. G. A. Black 52-15055 (IAN 75702, holotype).



**Plate II.** *Spigelia rondoniensis* Fern ndez Casas. *G. A. Black 52-15055* (IAN 75702, holotype). a) Seed. b) Enlarged pericarp, without papillas. c) Metastyle and calyx. d) Leaf margin with antrorse denticles.





*Petiole* almost non-existent, the lamina base is cuneate, attenuate. *Lamina* narrow lanceolate, up to 30(-40) × 3-4 mm; *midrib* slightly imprinted or level at the face, projecting outwards on the back; *secondary nerves* not very apparent. *Margin* narrow, revolute, minutely denticulate; *small teeth* antrorse, colourless and transparent.

**INFLORESCENCE** terminal, 1-2, long, 1-3 cm pedunculate, up to 28 flowers turned toward the same side. *Axes* angulate or subulate. *Bracts* 1-1,5 mm, lanceolate, similar in form to the sepals but of smaller; with antrorse denticulate margins.

**FLOWERS** turbinate, opened 11-13 × 4-5 mm. *Peduncule* up to 3 mm. *Calyx* ca. 2.5 mm, 0.5 mm connate; *sepals* lanceolate, unkeeled, denticulate white margin; denticules antrorse, hyalinous, well separated. *Corolla* red, turbinate, upward plicate in buds. Five *stamens*. *Filaments* connate with corolla tube extending half their length, incurvate at apex; at the origin of the free part there is a laterally compressed dilation aligned with a radial plane. *Anthers* ca. 1.7 mm, arrow shaped, dorsally inserted near the base, inclusive, introrse. *Ovary* between spherical and conical. *Style* cylindrical, very narrow, lon-

ger that the stamens. *Stigma* ca. 1 mm, a little wider at the base than in the style, papillose, closely conical, obtuse; it stands out from the anthers.

**CAPSULE** ca.  $3 \times 4 \times 2$  mm, longer than the persistent sepals; carpelar *seam* very marked. *Pericarp* smooth all over. *Metastyle* ca. 3 mm, sometimes rather flexuose. *Carpoatlas* (none has been seen whole, only fragments) rhombic navicular, whitish, ca.  $3 \times 2$  mm. *Granatule* apparently with few seeds, we counted four twice, and one single occasion; much bigger than the normal in the second case.

**SEEDS** rather variable, but predominant forms are those between pyramidal truncated with the base convex (external face) and dug-out internal face, and with the hilum in their centre, and those more in the shape of a spherical wedge. *Testa* with marked relief on entire surface. *Back* with cells measuring twice as wide as they are long; arranged in such a way that they half-define transverse grooves. *Pleurae* with more relief than the back, with approximately isodiametric cells.

#### OBSERVATIONS

The collection described here is the only known one of the genus we have studied from the state of Rondônia, where it has certainly been little collected.

Many of the plant's characters confer a resemblance to *Spigelia Martiana* Chamisso (1833), but differs in being a more delicate plant, with smaller leaves and fruits. The leaves are less revolute; their secondary nerves are even less conspicuous. The fruits are smaller, but easily exceed the length of the sepals. The metastyle is considerably longer, almost double the length, cf. F. J. FERNÁNDEZ CASAS (2003: 30, pl. xxii, fig. b). The seeds are quite similar in form; those of the new species seem smaller, with the reliefs of the most pronounced, cf. F. J. FERNÁNDEZ CASAS (2003: 30, pl. xxii, figs. e-j).

Although the label designates it as an annual plant, the appearance of the sheet with basal rhizomes –plate i, pag. 363, top right and bottom left– suggests rather that it is a hemicytophyte; we consider it thus in our description.

#### EXAMINED SPECIMEN

##### BRASIL, (24) RONDÔNIA:

**20LNL94** -13.16°, -062.12°; Reserva Biológica do Guaporé, entre Santo Antônio y Pedras Negras, cerca de la desembocadura del Rio Branco, 13°10'50"S, 062°06'13"W, «(Territorio do Guaporé) fazenda Cruz Verde. Campo. Anual. Flores roxas», G. A. Black 52-15055 & E. Cordeiro, 18-VI-1952 (IAN 75702, holo-; typus *S. rondoniense*).

#### ACKNOWLEDGEMENTS

Miguel Jerez Luna produced the electron micrographs in plate ii. Ulpiano Emilio Souto Mandelos processed the digital photographs of the plate i (page 339); he also made the distributional map of the page 341.

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