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A new species of *Clinopodium* (*Lamiaceae*) from E Cuba

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Abstract: *Clinopodium rankiniae*, a new species from the SE region of Cuba, is described and illustrated. It appears to be closely related to the other endemic species of Cuba and Hispaniola (*C. alpestre*, *C. banaoense*, *C. bucheri* and *C. ekmanianum*), which grow isolated in mountainous ecosystems. It differs primarily by the disposition of the leaves (mostly on short, lateral brachyblasts), the colour of the corolla (white, with a very light purple tinge) and the hirsute to tomentose calyx.

Key words: Caribbean, *Clinopodium*, Cuba, endemism, *Lamiaceae*, *Lamiales*, new species, taxonomy, West Indies

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The genus *Clinopodium* L. (*Lamiaceae*), sensu Wagstaff & al. (1995), Cantino & Wagstaff (1998) and Harley & Granda Paucar (2000), comprises about 100 species, most in the New World and only some in Eurasia and Africa (Harley & al. 2004). In Cuba, six species of *Clinopodium* were known (Pool 2008; Greuter & al. 2016), which have been considered indistinctly as *Micromeria* Benth. (Grisebach 1866; Sauvalle 1873; Gómez de la Maza 1897; Urban 1919; Britton & Wilson 1922; Borhidi 1981) or *Satureja* L. (Urban 1924a, 1924b; Alain 1956, 1957; Méndez Santos & al. 2005).

While reviewing the genus *Clinopodium* for the *Flora de la República de Cuba*, we found a gathering in B, HAJB and JE collected in 1989 in Santa María del Loreto (Sierra de Los Ciegos), Santiago de Cuba province, with characters that differ from all the species hitherto described. Studies of this natural population and comparison with similar taxa from the Greater Antilles, described by Urban (1919), Britton & Wilson (1922), Alain (1968) and Méndez Santos & al. (2005), lead us to propose a new species.

Clinopodium rankiniae I. E. Méndez, **sp. nov.** – Fig. 1, 2. Holotype: Cuba, Provincia Santiago de Cuba, altiplanicie de Santa María del Loreto, finca Los Monieles, al este de la subestación eléctrica con paneles fotovoltaicos, vegetación secundaria sobre suelos derivados de areniscas y conglomerados, al borde de los farallones, 1 Oct 2016, *I. E. Méndez, J. C. Rifá & C. Regalado 12016* (HIPC; isotypes: B, HAC, HAJB, JE, PAL-Gr, ULV).

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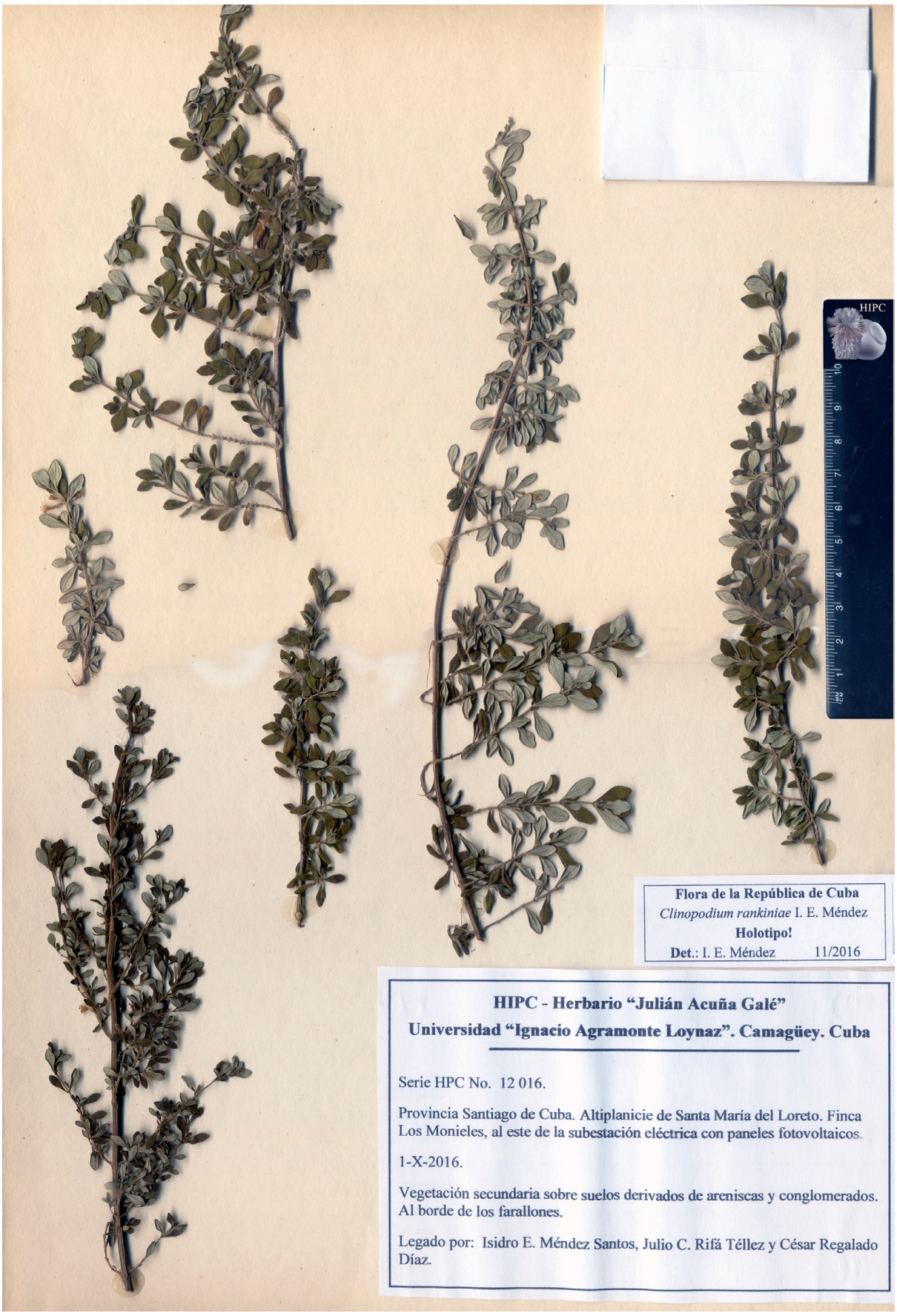

Fig. 1. *Clinopodium rankiniae* – holotype (*I. E. Méndez & al. 12016*, HIPC).

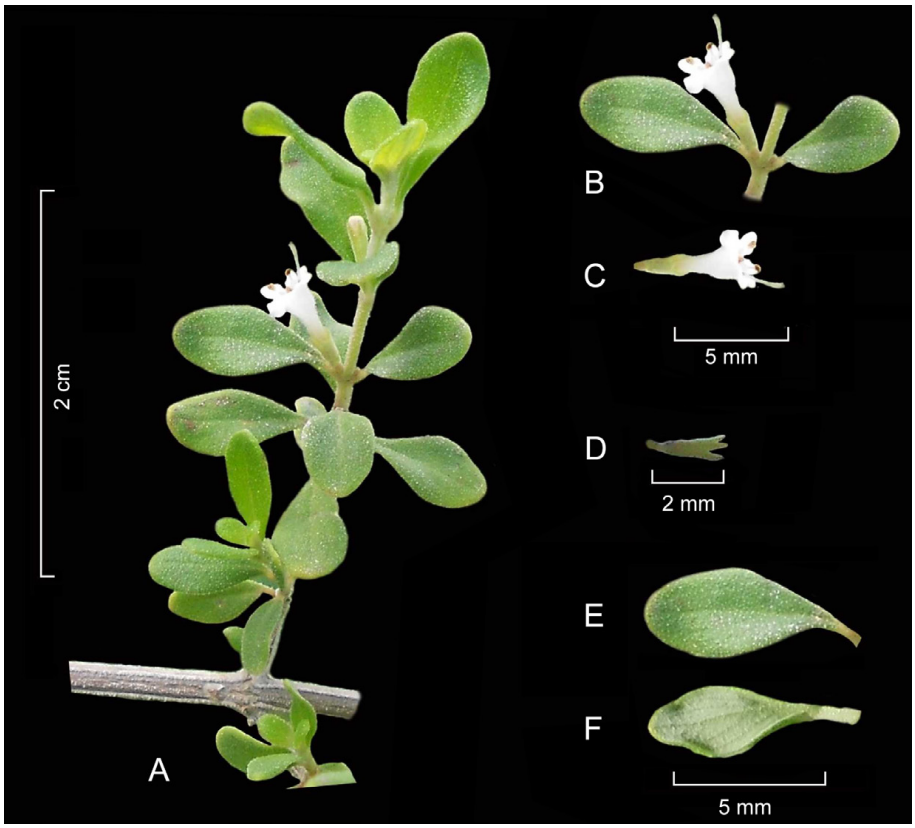

Fig. 2. *Clinopodium rankiniae* – A: lateral brachyblast; B: disposition of leaf and flower; C: flower; D: calyx; E: adaxial surface of leaf blade; F: abaxial surface of leaf blade. – All from live plants from the type locality.

Description — *Shrubs* erect, to 2 m tall, usually much branched. *Twigs* quadrangular, densely covered with a pale tomentose indumentum of tubercle-shaped, bulbous-based, stellate and/or branched hairs (also found on petioles, leaf blades, pedicels, bracteoles and calyxes). *Leaves* disposed on short, lateral brachyblasts; *petiole* c. 1 mm long; *leaf blade* obovate to oblanceolate, 3–10 × 2–5 mm, coriaceous, adaxial surface dark green, veins scarcely sunken, abaxial surface somewhat lighter, veins prominent, both surfaces hirsute-tomentose, more densely so abaxially, base acute to decurrent toward petiole, margin entire, revolute, apex acute or sometimes obtuse. *Flowers* solitary, inserted in leaf axils on short, lateral brachyblasts; *pedicel* c. 1 mm long; *bracteoles* lanceolate to filiform, c. 2 mm long. *Calyx* narrowly campanulate or cylindric, 2-labiate; tube straight, 2–2.5 mm long, 10–12-nerved, hirsute to tomentose outside; upper lip oblong, 3-dentate, teeth acute, central one lightly longer; lower lip 2-dentate, teeth acute to lanceolate, 1-nerved. *Corolla* white, with a very light purple tinge, funnel-shaped, 2-labiate; tube straight, c. 4.5 mm long; upper lip emarginate; lower lip 3-lobate, lobes rounded to spatulate, c. 1.5 mm long. *Stamens* 4, c. 1.5 mm long above insertion point in corolla, glabrous, anterior pair slightly exserted from corolla tube. *Ovary* elongate, glabrous; *style* exserted. *Nutlets* elongate, c. 1 mm long, puberulous only in distal third.

Distribution and ecology — *Clinopodium rankiniae* is known only from the Santa María del Loreto plateau, municipality of La Maya, province of Santiago de Cuba. It grows on a substratum originating from gritty rocks formed by granitic sediments. At this locality, the average annual precipitation is 1200–1400 mm. Associated species include: *Bellonia spinosa* Sw., *Calycogonium rhamnoideum* Naudin, *Casearia hirsuta* Sw., *Citharexylum tristachyum* Turcz., *Guapira obtusata* (Jacq.) Little, *Ipomoea subrevoluta* Choisy, *Malpighia suberosa* Small and *Plumeria filifolia* Griseb., among others.

Eponymy — The epithet is in honour of Rosa Rankin Rodríguez, Cuban botanist, co-editor of the *Flora de la República de Cuba* and member of the team that first gathered the species in 1989.

Affinities — *Clinopodium rankiniae* is similar to the other four endemic species of Cuba and Hispaniola (Haiti: *C. ekmanianum* (Epling & Alain) Harley; Dominican Republic: *C. alpestre* (Urb.) Harley; Cuba: *C. banaoense* (P. Herrera & al.) Melnikov and *C. bucheri* (P. Wilson) Harley). All of them are typical of mountainous ecosystems, characterized by a peculiar indumentum on the branches, leaves and inflorescences, with tubercle-shaped, bulbous-based, stellate and/or branched hairs. Within this group, *C. rankiniae* is more similar to *C. alpestre* and *C. ekmanianum* by its leaves being ± compacted on short, lateral brachyblasts and the colour of the corolla being basically white. *Clinopodium ekmanianum* and *C. rankiniae* differ from *C. alpestre* by the obovate to oblanceolate (instead of triangular) leaf blade with a revolute (instead of ± flat) margin. *Clinopodium rankiniae* is finally distinguished by the hirsute to tomentose calyx and a very light purple tinge of the corolla. Besides, *C. rankiniae* occurs distant and completely isolated from the species of Hispaniola, to which it is most morphologically similar, and occurs under markedly different geological and edaphic conditions (Cuba: substratum originating from gritty rocks formed by granitic sediments; Hispaniola: soils derived from calcareous rocks).

Melnikov (2014) classified all these species as belonging to *Clinopodium* subg. *Xenopoma* (Willd.) Melnikov

in Novosti Sist. Vysš. Rast. 45: 148. 2014 [≡ *Xenopoma* Willd. in Mag. Neuesten Entdeck. Gesammten Naturk. Ges. Naturf. Freunde Berlin 5: 399. 1811 ≡ *Micromeria* sect. *Xenopoma* (Willd.) Benth. in Candolle, Prodr. 12: 222. 1848 ≡ *Satureja* sect. *Xenopoma* (Willd.) Briq. in Engler & Prantl, Nat. Pflanzenfam. 4(3a): 300. 1895].

Conservation status — *Clinopodium rankiniae* is at present considered a very rare species. So far, it is only documented in one locality with a total of fewer than 50 mature individuals. The extent of occurrence is smaller than 100 km^2 and the area of occupancy is smaller than 10 km^2 with proven reduction since 1989. The species can therefore be provisionally assessed as Critically Endangered CR B1ab(ii,iii,v)+2ab(ii,iii,v); C2a(i); D according to the IUCN Red List categories and criteria (IUCN 2012).

Additional specimens seen — Cuba: Provincia Santiago de Cuba: altiplanicie de Santa María del Loreto, finca Los Monieles, al este de la subestación eléctrica con paneles fotovoltaicos, vegetación secundaria sobre suelos derivados de areniscas y conglomerados, al borde de los farallones, 10 May 2016, *C. Regalado 12002* (HIPC); Municipio Santiago de Cuba [in error; correctly: Mun. Songo – La Maya], altiplanicie de Santa María del Loreto [Sierra de Los Ciegos], Alto de la Torre, vegetación secundaria sobre caliza [in error; correctly: sobre suelos derivados de areniscas y conglomerados], 3 May 1989, *Gutiérrez & al. 67956* (B 100363784, HAJB, JE).

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