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Flora of Espírito Santo, Brazil

Flora of Espírito Santo: *Prepusa* and *Senaea* (Helieae, Gentianaceae)

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Abstract

The Flora of Espírito Santo presents three species of Helieae (Gentianaceae), circumscribed in the genera *Prepusa*, with two species, and *Senaea* with only one species. These poorly known species are described and illustrated here, and had their diagnostic characters and their similarities with other species discussed. In addition, this paper provides an emended key for species and geographic distribution maps of all species of *Prepusa* and *Senaea* from Flora of Espírito Santo, with additional comments on their conservation status.
Key words: Brazil, endemism, *Prepusa*, *Senaea*, taxonomy.

Resumo

A Flora do Espírito Santo possui três espécies da Tribo Helieae (Gentianaceae), circunscritas nos gêneros *Prepusa*, com duas espécies, e *Senaea*, com apenas uma espécie. Essas espécies pouco conhecidas são aqui descritas e ilustradas, e tiveram discutidos seus caracteres diagnósticos e suas semelhanças com outras espécies. Além disso, este artigo fornece uma chave de identificação para as espécies e mapas de distribuição geográfica de todas as espécies de *Prepusa* e *Senaea* da Flora do Espírito Santo, bem como comentários adicionais sobre seus *status* de conservação.
Palavras-chave: Brasil, endemismo, *Prepusa*, *Senaea*, taxonomia.

Introduction

Parsimony analyses based on morphological data suggests that the genus *Prepusa* and *Senaea* are sister to one another, although this relationship receives only a limited boot-strap support, with the monophyly of *Prepusa* supported by only winged calyces, and less than 50% of the synapomorphies that support them are not yet well understood (Calió *et al.* 2008; Struwe *et al.* 2002, 2009).

The genus *Prepusa* contains only six species, five of them endemic to rocky outcrops in eastern Brazil and one restrict to campos rupestres (herbaceous or shrubby vegetation on sandy or stony soils) and cerrados (savannas) in the northeast of Brazil (Calió *et al.* 2008). *Prepusa alata* Porto & Brade (1935: 222), *P. connata* Gardner *ex* Hooker (1839: 225) and *P. hookeriana* Gardner *ex* Hooker (1841: 3909), are endemic to the state of Rio de Janeiro, occurring in the high-altitude grasslands (campos de altitude); *P. montana* Martius (1827: 121), is endemic to the state of Bahia, occurs in campos rupestres and cerrados, sometimes close to river margins and swamps, in the Chapada Diamantina, while *P. viridiflora* Brade (1949: 18) and *P. dibotrya* Fraga, Fontana & Kollmann (2014: 288) are endemic to the state of Espírito Santo, restricted to the saxicolous vegetation islands (mats) on granitic and gneissic inselbergs associated with the Atlantic forest domain (Calió *et al.* 2008; Fraga *et al.* 2014).

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The genus *Senaea* present two disjunct species, *Senaea coerulea* Taubert (1893: 516) is endemic to the shrubby vegetation on sandy soils in the campos rupestres, while *Senaea janeirensis* Brade (1932: 118), described for state of Rio de Janeiro, extends its distribution to areas of cloud forests to the state of Espírito Santo (Calió *et al.* 2008).

The present study aims to review the taxonomy of *Prepusa* and *Senaea*, describing its morphology alongside illustrations and geographic distribution maps, supported by an emended key for all species.

Material and Methods

Morphological data were obtained through the study of herbarium specimens and living material collected in the field. The descriptions and illustrations are based on both living and dried material studied using a stereomicroscope, morphological characters are based on Harris & Harris (2001) and Beentje (2010), the inflorescence analysis follows Weberling (1989), and the emended key to the species of *Prepusa* and *Senaea* is based on Calió *et al.* (2008) and Fraga *et al.* (2014).

The voucher of the specimens are housed in the herbariums ALCB, BHCB, CEPEC, HCF, HUEFS, HRCB, K, MBM, MBML, MO, NY, P, RB, SAMES, SP, SPF, U, UEC, UFMT, UPCB, US, VIES. Data on the distribution of the species are presented in a map, with elevations and state limits. The map was made using DIVA-GIS, version 5.2 (Hijmans *et al.* 2005).

Key to the species of *Prepusa* and *Senaea* of Espírito Santo

1. Fleshy or sometimes leathery calyces, 4–5-merous corollas and flattened styles .... other Helieae species.
1'. Membranaceous calyces, 6-merous corollas, and cylindrical styles..... 1. *Prepusa* or 2. *Senaea*
   2. Calyx greater than 20 mm, half as long or longer than the corolla; corolla lobes much shorter than corolla; cream to brown-purplish or greenish-yellow to castaneous in the upper half.
      3. Leaf blades with apex obtuse to rounded, sometimes mucronulate; inflorescence compound; corolla wine-brown, usually longer than the calyx; stigma villous on adaxial surface .... 1.1. *Prepusa dibotrya*
      3'. Leaf blades with apex acuminate to acute, rare mucronulate; simple inflorescence; corolla green, usually the same size as the calyx; stigma verrucose on adaxial surface..... .....1.2. *Prepusa viridiflora*
   2'. Calyx less than 10 mm, much shorter than the corolla; corolla lobes almost as long as corolla tube, white-purple in the upper half..... 2.1. *Senaea janeirensis*

Results and Discussion

1. *Prepusa* Mart. Nov. Gen. Sp. Pl. 2: 120. [1826] 1827.

1.1. *Prepusa dibotrya* Fraga, A.P. Fontana & L. Kollmann, Phytotaxa 163(5): 288. 2014.

Figs. 1; 2a-c

Herbs, woody at the base, 29–43 cm tall without the inflorescence, branched at the base. Stems cylindrical 3.6–8.3 mm diam., internodes 3.8–28.7 mm long at the base, pale yellowish to castaneous, thereafter quadrangular 4.1–8.8 mm long, winged, internodes 6.3–140.5 mm long in the leafy part and below inflorescence, greenish-castaneous to dark wine-coloured. Leaves sessile, oppositely crossed, colleters internal; blade elliptic-oblong to narrowly elliptic, oblanceolate, 60.5–160 × 18.8–45.2 mm, base attenuate to connate-perfoliate only at the base, margins straight to slight revolute, apex obtuse to rounded, sometimes mucronulate; adaxial surface sulcate to conduplicate at the base, dark-green to wine-coloured at the apex, abaxial surface carinate in the midvein at the base, greenish, 2–5 pairs of secondary veins greenish to white. Inflorescence compound, dibotryum, terminal, erect, 2–5 botryoid paraclades, 15–53-flowered, cylindrical 190–320 × 1.8–5.5 mm, internodes 20–165 mm long, wine-coloured, ending in triads; botryoid paraclades, erect, 3–9-flowered, cylindrical, 2–135 × 1–3.1 mm, internodes 2–130 mm long, ending in triads, wine-coloured; bracts of peduncle, rachis and of the botryoid paraclades elliptic, obovate or oblanceolate, 7–45 × 3–26 mm, connate-perfoliate only at the base, colleters

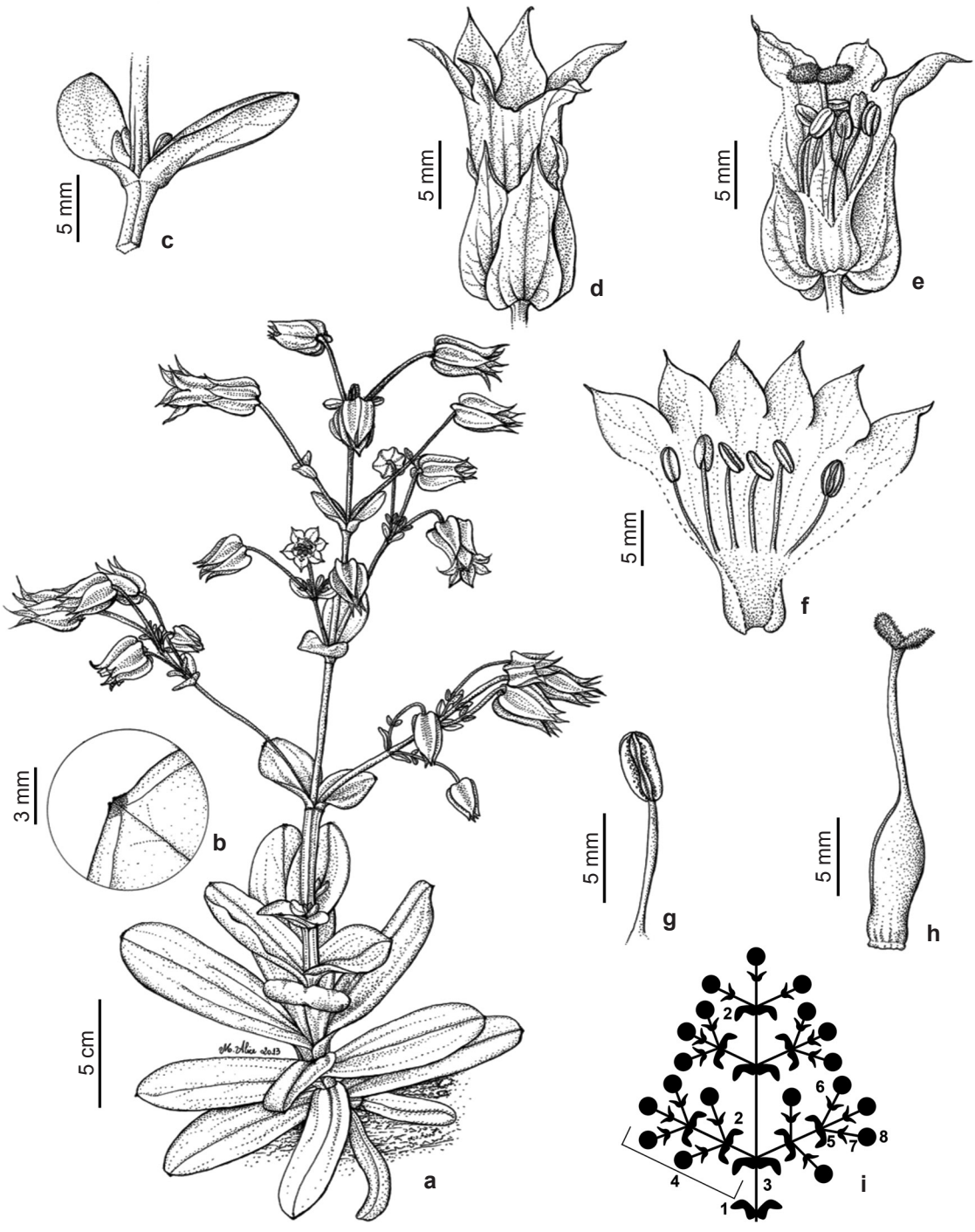

Figure 1 – a-i. Line drawing of *Prepusa dibotrya* – a. habit; b. detail of the apex and adaxial side of the leaf blead; c. detail of the branchlet apex, bracts and the inflorescence base; d. flower, side view; e. pedicel, sepals, petals, stamens, and ovary, side view (sepals and petals partially cropped); f. stretched petals, front view; g. stamen, front view; h. ovary, side view; i. dibotryum (1 = bracts of peduncle; 2 = bracts of rachis; 3 = peduncle; 4 = botryoid paraclades; 5 = hypopodiuns; 6 = bracteoles; 7 = pedicel; 8 = flowers). (a-i. *L. Kollmann et al. 12598*).

Figure 2 – a-l. Regions of occurrence and morphology of *Prepusa* and *Senaea* – a. general view of Pedra da Onça, in the municipality of Santa Teresa, occurrence area of *P. dibotrya*; b. habit of *P. dibotrya*; c. flowers at anthesis of *P. dibotrya*; d. general view of Monte Cristo and Caveira da Anta Complex, in the municipality of Alegre, occurrence area of *P. viridiflora*; e. general view of Parque Estadual da Pedra Azul, in the municipality of Domingos Martins, occurrence area of *P. viridiflora* and *S. janeirensis*. f. general view of Parque Estadual de Forno Grande, in the municipality of Castelo, occurrence area of *P. viridiflora*; g. habit of *P. viridiflora*; h. flowers at anthesis of *P. viridiflora*; i. general view of Facão de Pedra Massif, in the Parque Nacional do Caparaó, municipality of Divino de São Lourenço, occurrence area of *S. janeirensis*; j. population of *S. janeirensis*; k. branches of *S. janeirensis*; l. flowers at anthesis of *S. janeirensis*. Photos by C.N. Fraga, except e. by A.P. Fontanta and g. by L. Kollmann.

internal, margin straight to slight revolute, apex obtuse to rounded, sometimes mucronulate, adaxial surface sulcate to conduplicate at the base, dark-green to wine-coloured at the apex, abaxial surface carinate in the midvein at the base, greenish, 2–3 pairs of secondary veins greenish to white; bracteoles 1 pair per flower, inserted on top of the hypopodiuns, terminal flowers sometimes lackin subtending bracteoles, oblanceolate, narrowly elliptic or oblong, 2.5–7 × 0.5–2 mm**,** base attenuate to connate, apex mucronate, green to wine-coloured at the apex; hypopodium cylindrical 10–42 × 1.2–1.9 mm, green to wine-coloured; pedicel cylindrical, 11–47 × 0.6–1.3 mm at anthesis, green to wine-coloured at the apex. Calyx campanulate, 20–30 × 11–18 mm at anthesis, papillose internally and externally, dorsally winged, yellowish-green to paleaceous when old; wings 0.8–3.7 mm wide reaching the base of the calyx lobes or short wings at base of the sepals; lobes triangular, 6–10 × 5–8.6 mm at anthesis, apex acute. Corolla funnel-shaped, longer than the calyx, 13–33 mm long, 4.8–7.2 mm diam. at mouth, tube 6.5–9 mm long, 3–4.9 mm diam. at base, 3–4 mm wide below filament insertion; lobes lanceolate to ovate, 10–12 × 4.3–5.2 mm, margin slightly crenulate, apex acute or acuminate, cream to brown-purplish in the upper half, yellowish-green in the lower half to whitish at the base. Filaments almost equal in length, not twisted when dry, 10.4–13.6 mm long; anthers 4–4.1 mm long, attached to filaments 1–1.1 mm long from the anther base. Ovary 7.8–9.2 mm long; style 8.4–9.7 mm long; stigma bilamellate, lobes obovate, villous on adaxial surface, 2.2–3 mm long. Capsule dehiscent, 11–18 mm long; seeds 0.1 mm.

Material examined: Santa Teresa, Pedra da Onça, 23.XII.2008, *M.D.S. Demuner* (MBML 49165); 19º53’54.2”S, 40º48’56.3”W, 975-1,029 m elev., 8.III.2009, *M.D.S. Demuner & S. Venturini 59* (MBML); 25.III.2009, *M.D.S. Demuner & A.M. Assis 90* (MBML); 10.VIII.2009, *M.D.S. Demuner & H. Loss 122* (MBML). Brejetuba, Monte Feio, 20º10’32”S, 41º17’10”W, 1,310 m elev., 27.VII.2009, *A.P. Fontana & L. Menini-Neto 4054* (MBML).

Prepusa dibotrya is restricted to two inselbergs, Pedra da Onça, on the border between Santa Teresa and Itarana municipalities (Fraga *et al.* 2014) and Monte Feio in the municipality of Brejetuba, at elevations between 900–1,030 m (Fig. 3). This region is characterized by inselbergs that are frequently dome-shaped and rise more or less abruptly above the surrounding landscape and limited by the border of Tropical Semideciduous Forest. These areas are continuously subject to drought, usually in the saxicolous vegetation islands (mats) on inselbergs with outcropping granitic and gneissic rocks (De Paula *et al.* 2020), and the habitat is characterized by rather sparse vegetation, with thickets of shrubs among a herbaceous layer that usually fades in the dry season (Fraga *et al.* 2014). *Prepusa dibotrya* did not have its extinction risk assessed at the national level back in 2013 (Guimarães *et al.* 2013), as it was only described in 2014, but it was later evaluated in a regional analysis of extinction risk undertaken for the preparation of the red list of Espírito Santo, and it was considered endangered (EN) during this effort (Fraga *et al.* 2019).

The species can be readily distinguished from the other species of the genus by its compound inflorescences and flowers with villous, and to some extent resembles *Prepusa viridiflora* Brade for presenting herbaceous habit, dorsally winged calyx, wings reaching the base of the calyx lobes. However, *P. dibotrya* differs from the latter by stems that are cylindrical at the base yet merging to quadrangular (*vs.* cylindrical), leaf blade with apex obtuse or rounded (*vs.* acuminate or acute), inflorescences compound, dibotryum, (*vs.* simple), bract apex obtuse to rounded, sometimes mucronulate (*vs.* an acute or acuminate), calyx papillose on the inner and outer surface (*vs.* papillose only on the inner surface), corollas wine-brown, usually longer than the calyx, with lobes lanceolate, and apex acute or acuminate (*vs.* green, usually the same size as the calyx, with lobes widely ovate, and caudate apex), filaments less than 20 mm long (*vs.* more than 20 mm long), anthers attached to the filament 1–1.1 mm from the anther base (*vs.* anthers attached to the filaments 1.7–2.1 mm from the anther base), ovary less than 10 mm long (*vs.* more than 10 mm long), styles less than 10 mm long (*vs.* more than 10 mm long), stigmas with villous obovate lobes (*vs.* stigmas with verrucose lobes, very widely ovate or oblong).

This species displays a lot of variation in sepals wings, the specimen collected in Brejetuba (*Fontana 6054*) usually have short wings at base of the sepals and absent at the apex. However, the poor sampling currently available does not allow us to split it into intraspecific taxa or even in different species, thus further studies and more intensive collections of this species are needed.

1.2. ***Prepusa viridiflora*** Brade, Arch. Jard. Bot. Rio de Janeiro 9: 18, t. 10, 11. (1949) 1950.

Figs. 2d-h; 4

Herbs, woody at the base, 37–82 cm tall without the inflorescence, unbranched or branched at the base. Stems cylindrical 4–8.5 mm diam., internodes 2–15 mm long at the base, pale yellowish to castaneous, thereafter cylindrical or sometimes quadrangular 55–200 mm long, not alate, internodes 5.3–14 mm long in the leafy part and below inflorescence, greenish-castaneous. Leaves sessile, oppositely crossed, colleters internal; blade elliptic to narrowly elliptic, oblanceolate, lanceolate, obovate or ovate, 35–147 × 7–35 mm, base attenuate to connate-perfoliate only at the base, margins flat, not revolute, apex acute, acuminate, rare mucronulate; adaxial surface sulcate to conduplicate at the base, dark-green, abaxial surface carinate in the midvein at the base, greenish, 1–4 pairs of secondary veins greenish. Inflorescence simple, botryum, (depauperate form of panicle), terminal, erect, 3–11-flowered, cylindrical 215–620 × 1.8–6.2 mm, internodes 55–240 mm long, flower over hypopodium, wine-coloured; bracts of the peduncle and rachis elliptic, obovate, oblanceolate or lanceolate, 15–97 × 4–21 mm, free or connate-perfoliate only at the base, colleters internal, margin flat, not revolute, apex acute or acuminate; adaxial surface sulcate to conduplicate at the base, dark-green to wine-coloured at the apex, abaxial surface carinate in the midvein at the base, greenish, 1–3 pairs of secondary veins greenish; bracteoles 1 pair per flower, inserted on top of the hypopodiuns, oblanceolate, narrowly elliptic or oblong, 7–15 × 2–5 mm**,** base attenuate to connate, apex acute or mucronate, green to wine-coloured at the apex; hypopodium cylindrical 21–152 × 1.5–3.5 mm, green to wine-coloured; pedicel cylindrical, 9–47 × 0.9–1.9 mm at anthesis, green to wine-coloured. Calyx campanulate, 25–52 × 17–33 mm at anthesis, papillose internally and sparse papillose externally, dorsally winged, green, yellowish-green or greenish-castaneous to paleaceous when old; wings 2–5.3 mm wide reaching the base of the calyx lobes; lobes triangular, 10–22 × 5.5–11.5 mm at anthesis, apex acute or acuminate. Corolla funnel-shaped, smaller or the same size of calyx, 21–47 mm long, 12–28 mm diam. at mouth, tube 14–25 mm long, 2.3–5.9 mm diam. at base, 5.3–7.8 mm wide below filament insertion; lobes ovate, 10–12 × 4.3–5.2 mm, margin slightly crenulate, apex acute, acuminate or caudate, greenish-yellow to castaneous in the upper half, yellowish in the lower

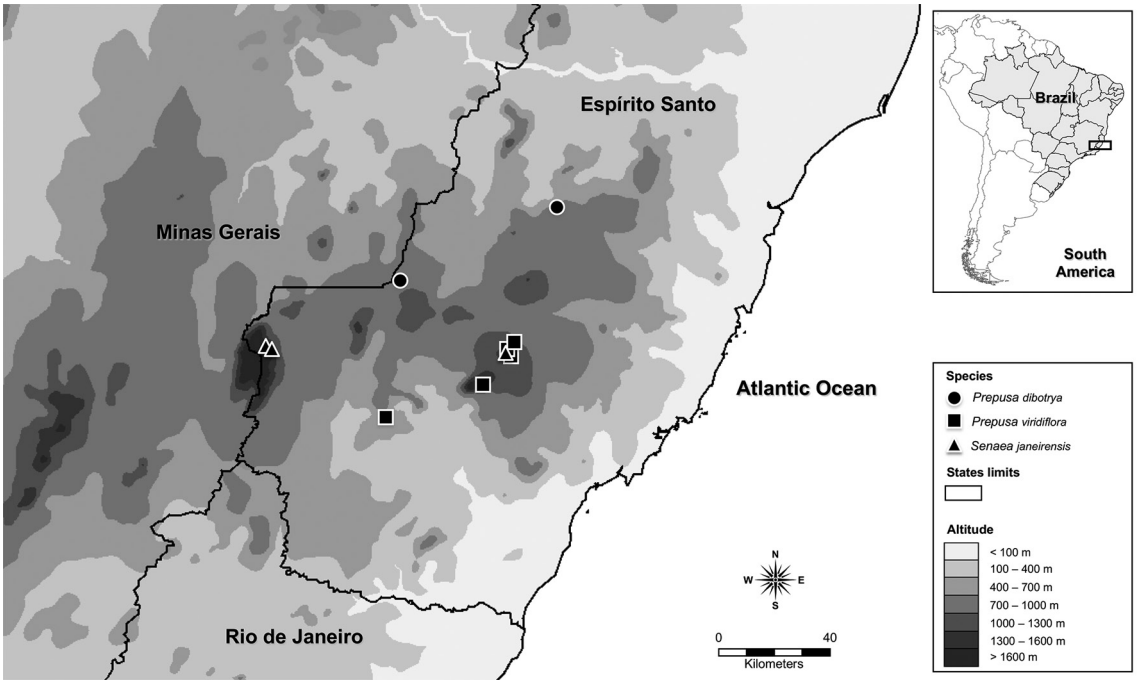

Figure 3 – Map showing the geographical distribution of *Prepusa dibotrya* (black dots), *Prepusa viridiflora* (black squares) and *Senaea janeirensis* (black triangle) in the south part of Espírito Santo, Brazil.

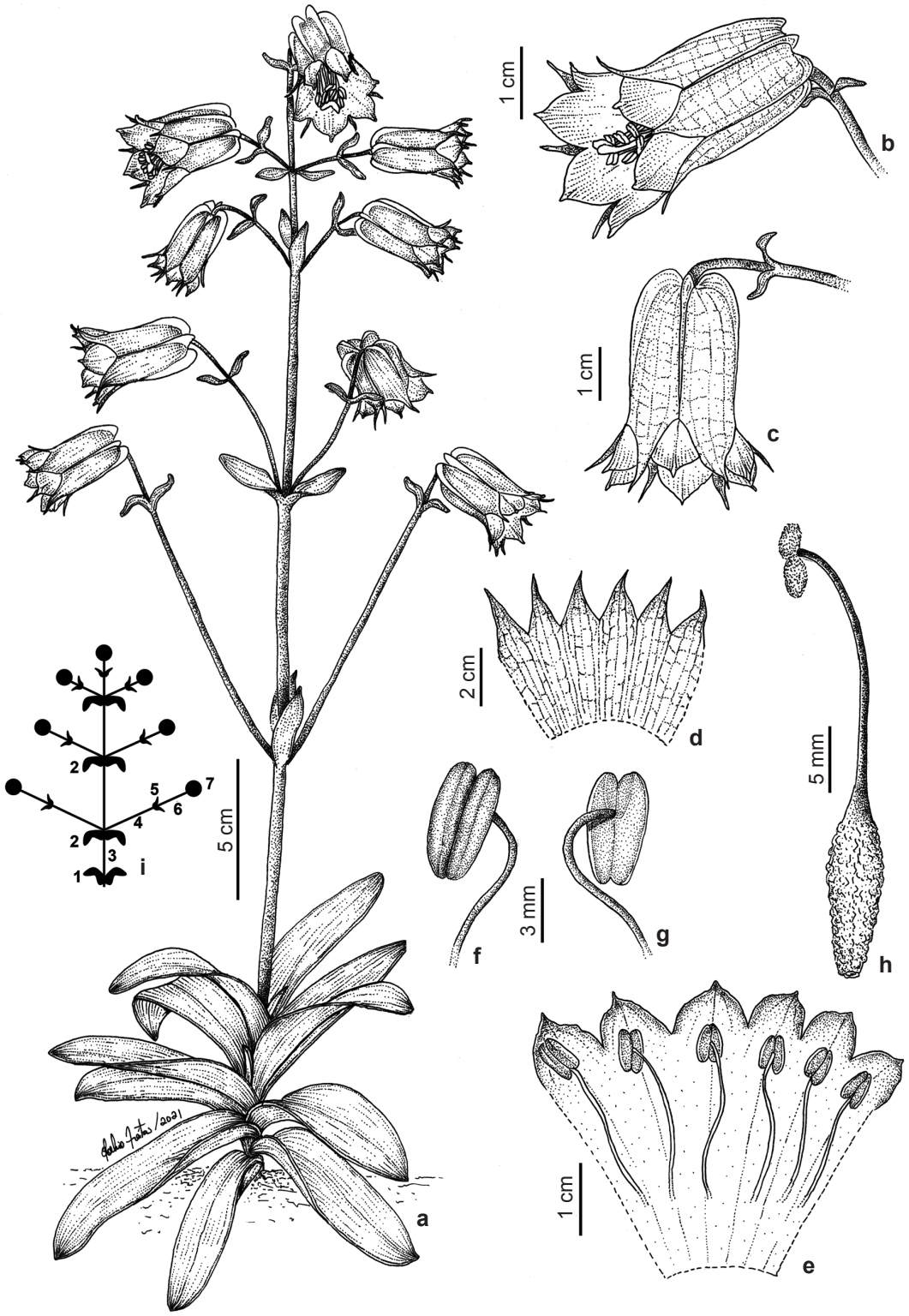

Figure 4 – a-i. Line drawing of *Prepusa viridiflora* – a. habit; b. flowers in perspective; c. flower in side view with pedicel, bracteoles, sepals and petals; d. stretched sepals, front view; e. stretched petals, front view; f. stamen, front view; g. stamen, from behind; h. ovary, side view; i. botryum (1 = bracts of peduncle; 2 = bracts of rachis; 3 = peduncle; 4 = hypopodiuns; 5 = bracteoles; 6 = pedicel; 7 = flowers). (a-i. *C.N. Fraga et al. 2233*).

half to whitish at the base. Filaments almost equal in length, not twisted when dry, 20–26 mm long; anthers 4.8–5.1 mm long, attached to filaments 1.7–3.2 mm long from the anther base. Ovary 11–16 mm long; style 18–22 mm long; stigma bilamellate, lobes obovate, verrucose on adaxial surface, 3–4.2 mm long. Capsule dehiscent, 11–18 mm long; seeds 0.1 mm.

Material examined: 1969, *Burce* (RB 227933); Serra Vitória-Minas, 3.IX.1967, *A.P. Duarte 10469* (RB). Alegre, Caveira da Anta, trilha do Cume, 1,142 m elev., 12.X.2007, *D.R. Couto et al. 368* (MBML, RB); Pedra da Caveira da Anta, 1,484 m elev., 5.VI.2009, *L. Kollmann et al. 11633* (RB). Castelo, Forno Grande, 1,200 m elev., 12.V.1949, *A.C. Brade 19782* (RB); Parque Estadual de Forno Grande, 1,129 m elev., 13.X.2000, *L. Kollmann & C.N. Fraga 3188* (MBML, RB, SPF); *C.N. Fraga & L. Kollmann 722* (MBML, RB); 11.VI.2004, *L. Kollmann & R.L. Kollmann 6708* (MBML); 1.XI.2004, *A.P. Fontana et al. 1010* (MBML); 31.V.2006, *L. Kollmann et al. 9134* (MBML); 1,700 m elev., 18.VII.2007, *P.H. Labiak et al. 4209* (MBML, NY, UPCB); 6.VIII.2013, *D. Monteiro et al. 845* (RB, UEC); trilha para o Forninho, 1,400 m elev., 12.II.2008, *R.C. Forzza et al. 4955* (CEPEC, HCF, MBM, MBML, RB, UPCB); afloramento por baixo do Mirante, beira do pasto, Inselbergue, 1,105-1,400 m elev., 16.VII.2008, *L. Kollmann & A.P. Fontana 11081* (MBML, RB, UPCB); trilha para a base do Fornão, Inselbergues, 1,500 m elev., 14.X.2008, *C.N. Fraga et al. 2233* (MBML, RB, UPCB). Domingos Martins, estrada entre Manhuaçu e Vitória, km 89, 7.IX.1977, *G.J. Shepherd et al. 5834* (UEC); 29.X.1987, *O.J. Pereira 1333* (VIES, U); Parque Estadual da Pedra Azul, 1.III.2016, *D.T. Wandekoken 41* (SAMES, VIES); *M. Arantes* (HRCB 74923); 13.VII.2005, *L. Kollmann & R.L. Kollmann 8023* (MBML, RB); Pedra Azul, 15.VI.1985, *G. Hatschbach 49407* (CEPEC, MBM, MO, US); rod. Vitória-Belo Horizonte, km 85, 1,000 m elev., 16.VI.1984, *G.J. Shepherd* (VIES 447, ALCB, CEPEC, UEC, UFMT); propriedade do Canal, Floresta Ombrófila Densa, afloramento rochoso com Mata ciliar, 1,285 m elev., 12.VII.2006, *A.P. Fontana et al. 2240* (RB).

Prepusa viridiflora occurs in the southern mountainous region of the state, in areas next to the Tropical Ombrophilous Forest, at elevations ranging between 1,100 to 1,600 m above sea level, with higher humidity levels, but remaining subject to drought due to the thin soil cover, and also are in the saxicolous vegetation islands on outcropping granitic and gneissic rocks, restricted to the Forno Grande (Parque Estadual de Forno Grande), the Pedra Azul (Parque Estadual da Pedra Azul) and the Caveira da Anta (Fig. 3).

These species had its extinction risk assessed back in 2013 (Guimarães *et al.* 2013) as endangered (EN), a conservation status that was also maintained in the red list of Espírito Santo (Fraga *et al.* 2019). For taxonomic comparisons, see comments under *P. dibotrya*.

2. *Senaea* Taub., Bot. Jahrb. Syst. 17: 515. 1893.

2.1. *Senaea janeirensis* Brade, Arq. Mus. Nac. Rio de Janeiro 34: 118. 1932. Figs. 2e,i-l; 5

Shrubs, 150–200 cm tall, branched. Stems cylindrical 10–70 mm in diam. at the base; branches 3–6.2 mm in diam., internodes 9–74 mm long in the leafy part and below inflorescence, green or yellowish-green to dark-castaneous when old. Leaves sub-sessile to short petiolate, oppositely crossed, colleters internal; petiole 1–3.7 mm long, adaxial surface sulcate at the base, green, abaxial surface carinate in the midvein at the base, yellowish-green, 1–2 pairs of secondary veins greenish; blade elliptic to narrowly elliptic or lanceolate, 28–98 × 7.5–26 mm, base long attenuate at the base, margins flat to sligthly revolute, apex acute or acuminate. Inflorescence compound cyme, terminal or axillar, erect, 1–6 lateral cymes, 8–32-flowered, cylindrical 36–78 × 1.7–3.5 mm, internodes 4–45 mm long, green, ending in triads; lateral cymes, erect, 1–3-flowered, cylindrical, 10–47 × 1.5–3.2 mm, internodes 3–6 mm long, ending in triads, green; leafy bract at the base of peduncle and rachis 22–60 × 5–20 mm, bracts of the botryoid paraclades linear, narrowly elliptic or elliptic-spatulate, 10–30 × 1–2.1 mm, free or connate-perfoliate only at the base, attenuate at the base, margin straight to slight revolute, apex acute or acuminate, adaxial surface sulcate to conduplicate at the base, abaxial surface carinate in the midvein at the base, both white-green; bracteoles 1 pair per flower, inserted on top of the hypopodiuns, free part linear, similar to bracts in shape and color, 6.8–15 × 0.6–1.7 mm; hypopodium cylindrical 6–16 × 0.7–1.3 mm in diam., white-green; pedicel cylindrical, 1–3 × 0.6–1 mm in diam., at anthesis, white-green. Calyx campanulate, 6.2–8 × 5–8.6 mm at anthesis, papillose externally and not papillate internally, rare dorsally winged, green, yellowish-green or greenish-castaneous whit white-purple dots to paleaceous and becoming lacerate when mature; lobes triangular, 0.6–2.5 × 2–4 mm at anthesis, apex acute or acuminate. Corolla campanulate, three times longer than the calyx, with a constriction at the level of stamen insertion and widening above, 22–28 mm long, 7.5–12 mm diam. at mouth, tube 10–12.5 mm long, 3–3.7 mm wide at base, 5–6.7 mm wide below filament insertion, 6.2–11.2 mm wide above filament insertion, papillose internally

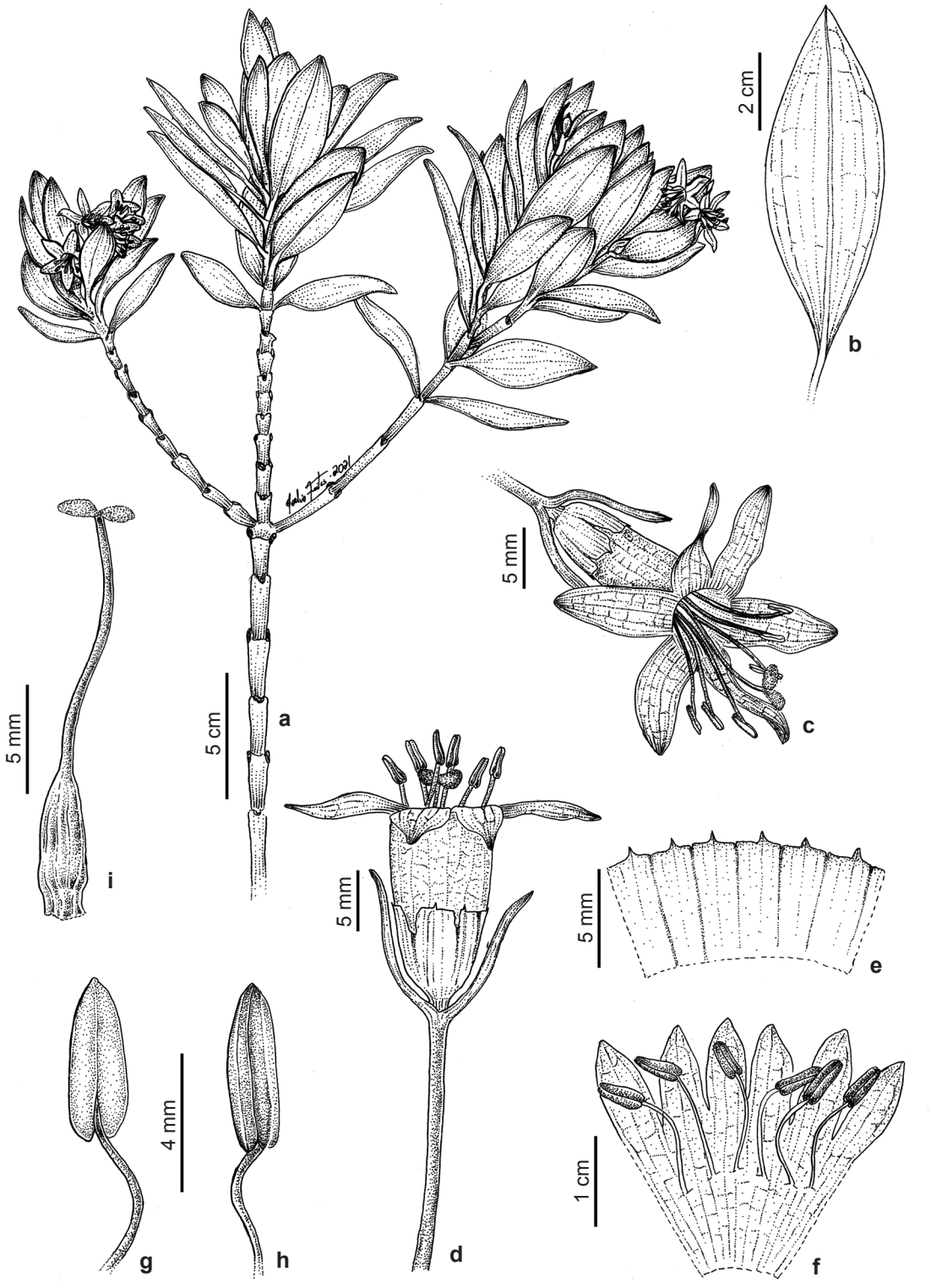

Figure 5 – a-i. Line drawing of *Senaea janeirensis* – a. habit; b. leaves, from behind; c. flowers in perspective; d. flower in side view with pedicel, bracteoles, sepals and petals; e. stretched sepals, front view; f. stretched petals, front view; g. stamen, front view; h. stamen, from behind; i. ovary, side view. (a-i. *L. Kollmann et al. 10471*).

and externally, white-purple in the lobes and in the upper half of the tube to whitish at the base; lobes oblong-lanceolate, 9–11× 4.1–5 mm margin slightly crenulate, apex acute, acuminate or mucronate, contorted. Filaments almost equal in length, not twisted when dry, 9.5–15 mm long; anthers 4.7–5.1 mm long, attached to filaments 2–2.5 mm long from the anther base. Ovary 6–9 mm long; style 9–14 mm long; stigma bilamellate, lobes obovate, verrucose on adaxial surface, 1.6–2.8 mm long. Capsule dehiscent, 5.8–7.2 mm long; seeds 0.5–0.9 mm.
Material examined: Divino de São Lourenço, Patrimônio da Penha, Parque Nacional do Caparaó, Facão de Pedra, 1,600-1,920 m elev., 24.I.2008, *L. Kollmann et al. 10471* (MBML, RB). Domingos Martins, Parque Estadual da Pedra Azul, Pedra das Flores, cume, 1,660 m elev., 11.VII.2006, *A.P. Fontana et al. 2228* (MBML, RB). Ibitirama, Parque Nacional do Caparaó, 1,600 m elev., 25.I.2013, *H.M. Dias et al. 816* (VIES).

Senaea janeirensis is endemic to mountainous areas of the states of Rio de Janeiro and Espírito Santo, this species was described from Desengano Massif collections, and it was last collected at this site in 1986. Due to recent increase in collection efforts in Espírito Santo, the species was found within the limits of two protected areas, Parque Nacional do Caparaó and Parque Estadual da Pedra Azul, representing an extension on its known historical distribution. The species is currently considered endangered (EN) at the national level (Guimarães *et al.* 2013), and it was not assessed regionally in Fraga *et al.* (2019) for not having been correctly identified previously. Time elapsed between the known collection suggests that this species is very rare.

Senaea janeirensis and *S. coerulea* are morphologically very close, both species are shrubs and the height of 6 m tall noted on the label of the specimen collected in Ibitirama (*Dias 816*) is probably wrong, although they have different habitats and disjunct geographical distributions, whit *Senaea coerulea* is endemic to the shrubby vegetation on sandy soils in the campos rupestres around of Cadeia do Espinhaço, state of Minas Gerais, while *S. janeirensis*, described for state of Rio de Janeiro, extends its distribution to areas of cloud forests to the south of the state of Espírito Santo, in the Serra do Mar. However, *Senaea janeirensis* differs from the *S. coerulea* by leaf blade elliptic with acute at apex (*vs.* leaf blade oblanceolate, obtuse and mucronate at apex), pedicels and calyx not papillate (*vs.* pedicels papillate and calyx papillate on outside), calyx lobe apices shorter less than 1 mm (*vs.* calyx lobe apices longer greater than 1.5 mm); corolla 20–23 mm long with ovate lobes (*vs.* corolla 29–30 mm long with lanceolate lobes), filaments less than 13 mm long (*vs.* filaments greater than 15 mm long), ovary less than 7 mm long (*vs.* ovary greater than 8 mm long), and style less than 13 mm long (*vs.* style greater than 15 mm long).

This species displays a lot of variation in sepals wings, the specimen collected in Parque Estadual da Pedra Azul (*Fontana 2228*) and in the municipality of Ibitirama (*Dias 816*) usually have short wings in the sepals with 0.2–0.4 mm wide, reaching the base of the calyx lobes, the other specimen (*Kollmann 10471*) do not have wings in the sepals. However, the poor sampling currently available does not allow us to split it into intraspecific taxa or even in different species, thus further studies and more intensive collections of this species are needed.

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