

Habenaria spanophytica J. A. N. Batista & L. B. Bianchetti, **sp. nov.** Type: Brazil. Distrito Federal: Samambaia, DF-280, em direção de Santo Antônio do Descoberto, dentro da área de Furnas, 7 Mar 1998 (fl), J. A. N. Batista 783 (holotype: CEN). (Figs. 5, 6)

Habenariae cardiostigmaticae J. A. N. Bat. & L. B. Bianch. similis, sed floribus minoribus (sepalo dorsali (2.5–)3×2.5–3 mm), segmentis lateralibus labelli brevioribus (3–3.5(–4.5) mm longis), apertura inter stigmata calcar ducenti circulari, brachiis rostellii latioribus (ca. 0.4 mm latis), apicem versus convergentibus, viscidii inter se prope continuis (ca. 0.2 mm) differt.

Terrestrial herbs. *Stem* erect, (36–)48–88 cm long, including the inflorescence, (1–)1.5–2 mm wide. *Leaves* 8–12, appressed to the stem, largest at the center of the stem, linear, narrow, 6–12×0.3–0.6 cm. *Inflorescence* (5–)8–13 cm long, few flowered, loose, somewhat secund; bracts ovate, caudate, 7–21×4–6.5 mm, longer than the ovary + pedicel. *Flowers* (6–)10–15, small, greenish white; ovary + pedicel mostly parallel to the rachis, 9–12 mm long, slightly arched. *Sepals* light green, discretely mucronate, margin smooth, whitish; dorsal sepal concave, when flattened roundish, (2.5–)3×2.5–3 mm; lateral sepals obliquely lanceolate, deflexed, 3.5–4×1.5–2 mm. *Petals* discretely bipartite, base whitish, turning light green towards the segments apices; posterior segment triangular to narrowly triangular, falcate, 2–3×1 mm, acute, free from the dorsal sepal; anterior segment reduced to a tooth-like projection, inserted at the base of the posterior segment, 0.5 mm long. *Lip* distinctly tripartite, base whitish, turning creamy white or light green towards the segments apices; undivided basal part short, 0.7×

1 mm; lateral segments linear-filiform, 3–3.5 (–4.5) mm long, the base usually perpendicular to the median segment; median segment linear, geniculate, 3(–4.5)×0.5 mm. *Spur* pending, totally or partially covered by the bracts, clavate, shorter than the ovary + pedicel, 7–9 mm long, green, base 0.5–0.7 mm wide, apex 1–1.2 mm wide. *Column* erect, 2 mm high; connective emarginate, green; auricles fleshy, verrucose, whitish. *Anther* 1 mm high, canals 0.4–0.5 mm long; hemipollinarium separated; viscidia 0.3×0.2 mm, about 0.2 mm apart from one another; caudicles 0.5–0.6 mm long. *Stigma lobes* 1.5 mm long, green, receptive surface convex, turned forwards, closely parallel, free part 0.8–0.9×0.6 mm, apex truncate, inner margin thickened, space between the stigma lobes circular. *Rostellum* 1.5 mm long, green, midlobe triangular, fleshy, obtuse, completely placed between the anther loci, 0.6–0.7 mm long, 0.6 mm high, side-lobes converging towards the apex, 0.8–0.9×0.4 mm.

Etymology.— From the Greek *spano* (few) and *phyton* (plant), referring to the fact that the species is usually found as single individuals or in small groups.

Distribution.— The new species is known from the savanna-like *cerrado* vegetation of central Brazil, in the states of Goiás (Santo Antônio do Descoberto and Cavalcante), Minas Gerais (Paracatu and Carrancas), and the Federal District (several localities). In a checklist of the Orchidaceae of the Federal District the species was listed as *Habenaria* aff. *aphylla* 4 (Batista & Bianchetti, 2003).

Habitat, ecology, and phenology.— The new species occurs in dry or seasonally humid grassy field (*campo limpo*) and grass-herb-subshrub field vegetation (*campo sujo*), over shallow, dry or seasonally humid, sandy soil, very often on slopes with gravel and blocks of rocks over the surface, and sometimes over gray, dry, sandy-clay soil associated with *murundus*, at about 1000 m. These soils can be superficially moist for brief periods during the rainy season, but never retain water for long periods and dry completely during the dry season. Other species such as *Habenaria obtusa* Lindl., *H. lavrensis* Hoehne, *H. armata* Rchb.f., *H. brevidens* Lindl. and *H. secundiflora* occur in the same habitat. Growth and flowering time occurs from the peak to the end of the rainy season,

from late December to early April (Table I). Though brushfires are apparently not essential, they significantly enhance flowering. Six of the seven collections of the species made by the authors were done in previously burned areas. Although the species has been collected in several localities at different times, in the seven collections of the species made by the authors and three additional field records that lack voucher specimens, only a single individual of the species was found in each place. In many instances the surroundings of the collection site were exhaustively searched, but no additional plants could be found. All other herbarium collections of the species are also represented by single specimens, except the collections *A.H. Salles et al. 4056*, with two specimens in the sheet, and *H. S. Irwin et al. 26225*, with one duplicate. This is a remarkable characteristic, since other *Habenaria* species are usually found as large assemblages, suggesting that *H. spanophytica* occurs in very low density populations.

Conservation status.—According to the World Conservation Union Red List Categories and Criteria (IUCN, 2001) the species can tentatively be classified as Vulnerable VU (criteria B2ab(iii); D1).

Additional specimens examined. BRAZIL. Distrito

Federal: Estação Ecológica Jardim Botânico de Brasília, 15°52'S, 47°51'W, 1025–1150 m, 17 Mar 2005 (fl), *Azevedo et al. 320* (HEPH); Setor de Mansões do Lago Norte, 14 Jan 1991 (fl), *Batista 149* (CEN); Setor de Mansões do Lago Norte, 12 Feb 1997 (fl), *Batista 676* (CEN); Chapada da Contagem, 31 Mar 1995 (fl), *Batista & Bianchetti 561* (CEN); Núcleo Bandeirante, Fazenda Sucupira, 28 Feb 1997 (fl), *Batista et al. 730* (CEN); Fazenda da Embrapa, 17 Feb 1998 (fl), *Batista et al. 766* (CEN); Chapada da Contagem, 4 Jan 1974, (fl) *Heringer 13076* (UB); São Bartolomeu, 17 Mar 1980, *Heringer et al. 3952* (IBGE); near Paranoazinho/Sobradinho stream, 15°38'59"S, 47°51'05"W, 15 Mar 2005 (fl), *Pastore et al. 1285* (CEN); Estação Ecológica Jardim Botânico de Brasília, 23 Mar 2006 (fl), *Salles et al. 4056* (HEPH); NW of Sucupira farm, 15°5'S, 18°02'W, 30 Dec 1998 (fl), *Sampaio et al. 293* (CEN). **Goiás:** Santo Antônio do Descoberto, slopes about 2 km from the center of the town, 7 Mar 1998 (fl), *Batista 775* (CEN); Cavalcante, 5 Apr 2003 (fl), *Pastore & Sukanuma 579* (CEN). **Minas Gerais:** Carrancas, Serra das Bicas, 21°34'48.3"S, 44°34'34.7"W, 1304 m, 15 Jan 2008 (fl), *Batista et al. 2408* (BHCB); Serra da Anta, 12 km N of Paracatu, 950 m, 6 Feb 1970, (fl) *Irwin et al. 26225* (UB, NY).

Paracatu, Minas Gerais, and identified as *H. aphylla* by Pabst. In the morphology of the perianth, *H. spanophytica* is markedly similar to *H. cardiostigmatica*, having the appearance of a smaller form of the latter, and for a time we thought it belonged to a subspecific taxon of *H. cardiostigmatica*. However, *H. spanophytica* is distinct from *H. cardiostigmatica* not only by the consistently smaller flowers (dorsal sepal (2.5–)3×2.5–3 mm vs. 3.5–4 (–4.5)×3(–4) mm in *H. cardiostigmatica*) but primarily by the column structure (Table II). In the morphology of the column it differs not only from *H. cardiostigmatica*, but also from the other species related to *H. crucifera* var. *crucifera*. In *H. spanophytica* the rostellum side-lobes are broader (ca. 0.4 mm wide vs. 0.15–0.2 mm wide in *H. cardiostigmatica*) and converging towards the apex (vs. parallel in *H. crucifera* var. *crucifera* and in all the other related species). Although the apices of the rostellum side-lobes do not converge completely, the viscidia are closer to each other in *H. spanophytica* (ca. 0.2 mm) than in the other species in the group (0.7–2.8 mm apart from one another).

As far as we could determine, this species was first collected in 1970 by H. S. Irwin in

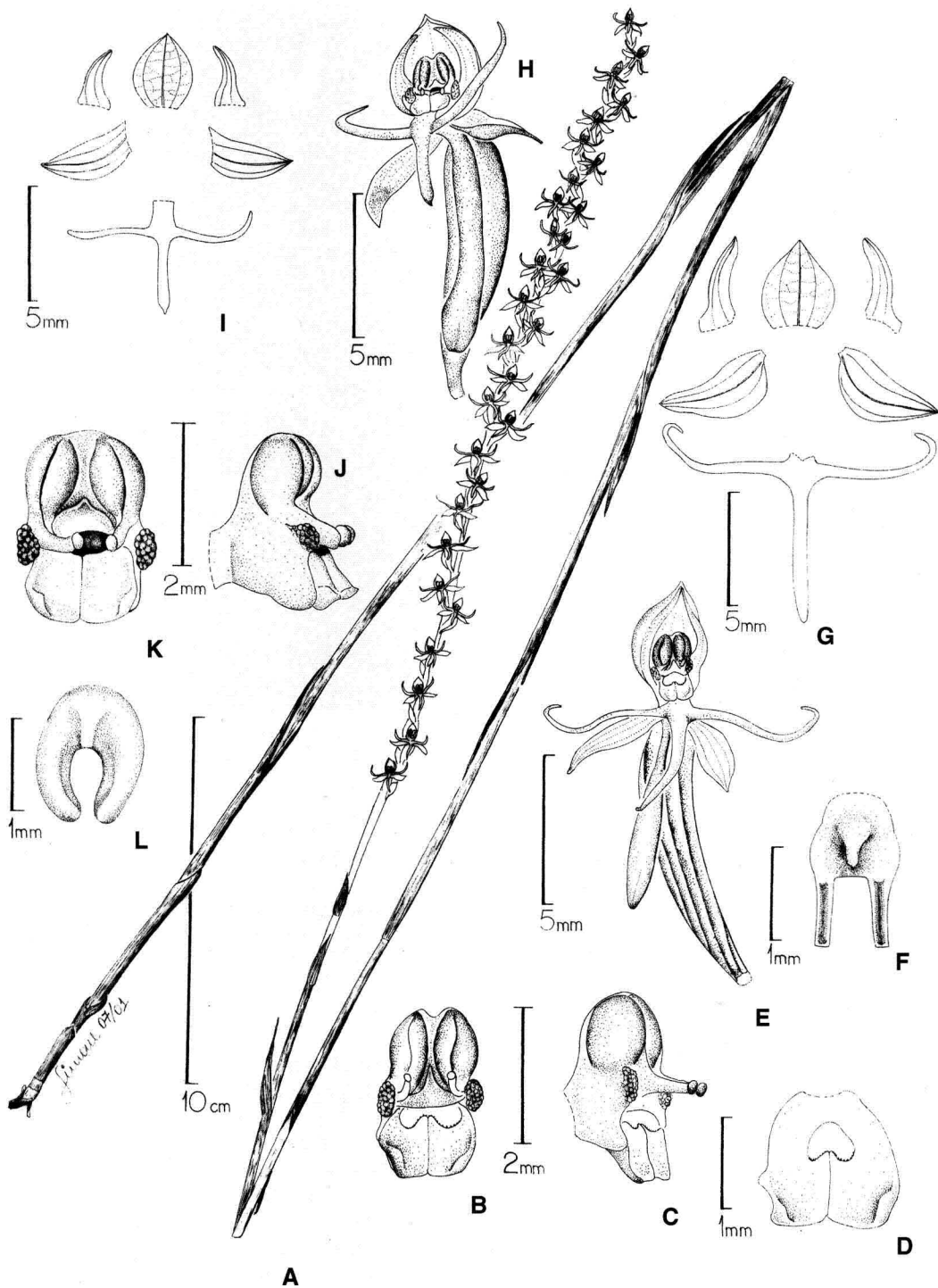


FIG. 5. *Habenaria cardiostigmatica* and *H. spanophytica*. A–G. *Habenaria cardiostigmatica*. A. Habit (Irwin et al. 26600, UB). B. Column, front view. C. Column, lateral view. D. Stigma lobes, upper view. E. Flower, front view. F. Rostellum, upper view. G. Perianth (B–G, Bianchetti & Batista 836, CEN). H–L. *Habenaria spanophytica* (Batista et al. 730, CEN). H. Flower, $\frac{3}{4}$ view. I. Perianth. J. Column, lateral view. K. Column, front view. L. Rostellum, upper view.



FIG. 6. Flowers from live specimens. *Habenaria cardiostigmatica*. **A.** From 'Setor de Mansões do Lago Norte', Brasília, Federal District. *Habenaria spanophytica*. **B.** From Sucupira farm, Núcleo Bandeirante, Federal District. Scale bars=1 mm.