



FIG. 4. *Habenaria guaraensis* and *H. crucifera* var. *brevitactyla*. A. *Habenaria guaraensis*, habit (Heringer 10803, UB). B–F. *Habenaria crucifera* var. *brevitactyla* (Batista 011, CEN). B. Flower, front view. C. Perianth. D. Rostellum, upper view. E. Column, lateral view. F. Column, front view. G–K. *Habenaria guaraensis* (Batista 136, CEN). G. Flower, front view. H. Rostellum, upper view. I. Perianth. J. Column, lateral view. K. Column, front view.

**Habenaria guaraensis** J. A. N. Batista & L. B. Bianchetti, **sp. nov.** Type: Brazil: Distrito Federal: Guará, Reserva Ecológica do Guará, 18 Dec 2000 (fl), *J. A. N. Batista 1096* (holotype: CEN; isotype: BHCB). (Figs. 2, 4)

*Habenariae cruciferae* Rchb.f. & Warm. var. *cruciferae* similis, sed habitatione campi graminosi perpetuo humidi (campo limpo inundavel dicti) supra solum instabilem, hydromorphicum, lobis lateralibus labelli brevioribus (3–4.5(–5) mm longis), deflexis, canalibus antherarum brevioribus (0.8 mm longis), et auriculis majoribus (1.3×1.5–1.8 mm) differt.

Terrestrial herbs. *Stem* erect, 78–97 cm long, including the inflorescence, 2–3.5 mm

wide. *Leaves* 9–12, appressed to the stem, largest at the center of the stem, linear, narrow, 6.5–12 × 0.4–0.8 cm. *Inflorescence* 10–13 cm long, few flowered, loose; bracts oblong-lanceolate, 10–23 × 4–6 mm, caudate, longer than the ovary + pedicel. *Flowers* 7–12, small, green; ovary + pedicel mostly parallel to the rachis, 12–16 mm long, ovary straight. *Sepals* mucronate, green, main veins slightly marked in darker green, margins smooth, whitish; dorsal sepal concave, when flattened ovate-lanceolate, 5–5.5 × 4–4.5 mm; lateral sepals obliquely oblong-lanceolate, reflexed, 5–6 × 2–2.5 mm. *Petals* discretely bipartite, base whitish, turning light green towards the segments apices; posterior segment lanceolate, falcate, 4–5 × 1.3–1.5 mm, acute, connivent with the dorsal sepal, anterior segment reduced to a tooth-like projection, inserted at the base of the posterior segment, (0.5–)1 mm long. *Lip* distinctly tripartite, base whitish, turning light green towards the segments apices; undivided basal part short, 1–1.5 × 1.2–1.5 mm; lateral segments deflexed, subreflexed, linear-filiform, 3–4.5(–5) mm long, the base forming an acute angle with the median segment; median segment linear, geniculate, 4–5 × 1 mm. *Spur* pending, totally or partially covered by the bracts, linear, shorter than the ovary + pedicel, 8–10.5 × 1.2–1.5 mm, green, apex acute. *Column* erect, 3–3.5 mm high; connective emarginate, green; auricles fleshy, verrucose, whitish, 1.3 × 1.5–1.8 mm, laterally covering the anther canals and rostellum side-lobes. *Anther* 1.5 mm high, canals short, 0.8 mm long; hemipollinarium separated; viscidia 0.2–0.3 × 0.2–0.3 mm, 1.3–1.5 mm apart from one another; caudicles 1.2 mm long. *Stigma lobes* 2.3 mm long, green, receptive surface convex, turned forwards, closely parallel, free part 0.8–1 × 0.8–1 mm, apex truncate, inner margin thickened, space between the stigma lobes circular. *Rostellum* 2–2.3 mm long, green, midlobe triangular, fleshy, subacute, completely placed between the anther loci, 1 mm long, 1.3 mm high, side-lobes parallel throughout, 1.3 × 0.5 mm.

*Etymology*.—The new species is named after the Guará Ecological Reserve.

*Distribution*. The new species is so far known only from the 'Reserva Ecológica do

Guará' a small preservation unit with 1.94 km<sup>2</sup> located in the Federal District. Despite the small area, 103 taxa of Orchidaceae occur in the reserve, including 32 *Habenaria*. In a published account of the Orchidaceae of the reserve (Batista et al., 2005) and in a checklist of the Orchidaceae of the Federal District (Batista & Bianchetti, 2003), *H. guaraensis* was listed as *H. aff. aphylla* 2.

*Habitat, ecology, and phenology*.—The new species occurs in permanently humid grassland (*campo limpo inundável*), in dark, water saturated, hydromorphic soil, with water over the surface, usually growing near the border of flooded gallery forests at about 1000 m. This habitat is typical of other terrestrial orchid species which demand water-saturated soil, such as *Phragmipedium vittatum* (Vell.) Rolfe, *Bletia catenulata* Ruiz & Pavon, *Cyrtopodium paludicolum* Hoehne, *Oncidium hydrophilum* Barb. Rodr., *Sarcoglottis uliginosa* Barb. Rodr. and several *Habenaria* such as *H. leucosantha* Barb. Rodr., *H. nuda* Lindl. var. *pygmaea* Hoehne, *H. gourlieana* Gill. ex Lindl., *H. edwallii* Cogn., *H. balansae* Cogn., and *H. pubidactyla* ssp. *brasiliensis* J. A. N. Bat. & Bianch. Vegetative and reproductive growth is associated with rainfall, and blooming time occurs at the peak of the rainy season, during December and January (Table I). The bloom appears to be strictly related to brushfires during the dry season. All collections of the variety by the authors were made in previously burned areas.

*Conservation status*.—In each of the three collections of the species made by the authors no more than about five blooming individuals were observed. Using the World Conservation Union Red List Categories and Criteria (IUCN, 2001) *H. guaraensis* can be tentatively classified as Critically Endangered CR (criteria B1ab (iii) + 2ab(iii); D).

**Additional specimens examined. BRAZIL. Distrito Federal:** Reserva Ecológica do Guará, 6 Jan 1990 (fl), Batista 56 (CEN, SP); 23 Dec 1990 (fl), Batista 136 (CEN); Zoobotânico, 20 Dec 1965 (fl), Heringer 10803 (UB, HB).

This taxon was first collected by E. P. Heringer in 1965 and identified as *H. aphylla* by Pabst. The new species is similar to *H. crucifera* var. *crucifera* but differs by growing in water-saturated, unstable, hydromorphic soil

related to *H. secunda* Lindl., *H. gustavi-edwallii* Hoehne, *H. araneiflora* Barb. Rodr. *H. achalensis* Kraenzl., and *H. brachyplectron* Hoehne & Schltr. The species in this group are characterized by broad, lanceolate leaves (up to 3 cm wide) that are not appressed to the stem, and by column morphology, with the inner margin of the stigma lobes having an acute projection at the apex, which turns upwards and touches the rostellum midlobe, dividing the entrance to the spur into two openings.