

nally glabrous to appressed puberulent or strigillose, light green to dark purple, the tube 12–18 mm long and 1.5–3 mm in diameter, the lobes falcately oblong to broadly ovate, acute to acuminate, the 2 upper lobes 12–18 mm long, the 3 lower lobes 7–10 mm long; filament tube exerted, 32–40 mm long, mostly glabrous although distally puberulous, the anthers ca. 5 mm long, externally puberulous, the 2 shorter anthers apically with a few white trichomes. *Berries* turbinate, ca. 12 mm high, 10 mm in diameter at apex; seeds dark brown, flattened, pitted, 0.8–1.0 mm long.

This little known species has been collected only a few times from the slopes of Cerro Horqueta and along the Bajo Chorro Trail, which are both in the vicinity of Boquete to the east of Volcán Chiriquí. The closest affinities of this species appear to be with *Burmeistera utleyi* which is known only from the Cerro Punta region to the west of Volcán Chiriquí and with *B. morii* from east of the Volcán and north of San Félix.

CHIRIQUÍ: Between Alto de las Palmas and top of Cerro de la Horqueta, 2100–2268 m, Pittier 3253 (US). Bajo Mono-Robalo Trail, W slopes of Cerro Horqueta, 5000–7000 ft, Allen 4811 (MO). S slopes of Cerro Horqueta, N of Boquete, ca. 6000 ft, Wilbur *et al.* 13467 (DUKE). SW slopes of Cerro Horqueta, ca. 6 km NW of Boquete, 1700–1800 m, Wilbur *et al.* 15440 (DUKE).

5. *Burmeistera dukei* Wilbur.⁶ TYPE: Panama, Kirkbride & Duke 1295 (MO, holotype; DUKE, REED, isotypes).

Suffruticose sprawling *herbs*; branches puberulent. Principal *leaves* with blades elliptic, 4–15 cm long, 1.8–6.0 cm wide, ca. 2–3 times as long as wide, apically acute, basally cuneate, marginally shallowly and indistinctly repand with the slightly callose serrulations mostly 5–8 mm apart, glabrous on the upper surface, densely puberulent on the principal veins beneath; petioles 0.5–1.8 cm long, moderately to densely puberulous. *Flowers* 2.2–2.5 cm long; pedicels solitary in the upper leaf axils, spreading to ascendant, slender, moderately to densely puberulous, ebracteolate, 2.5–4 cm long; hypanthium in anthesis cylindric, spiculate to puberulous, basally acute, 4–5 mm long, 2.5–3.5 mm in diameter medially; calyx lobes oblong to lanceolate, acute to obtuse, denticulate, puberulent, 3.5–5 mm long, 2.5 mm wide; corolla moderately to densely puberulent, green, the tube 6–7 mm long and ca. 2.5 mm in diameter, the lobes linear to narrowly oblong, the upper lobe 9–11 mm long, the lateral lobes, 6–8 mm long, the lowermost lobe about 5 mm long; filament tube glabrous or sparingly puberulent, 20–22 mm long, the anthers externally glabrous, 3–4 mm long, the lowest anther lightly pilose-fringed. *Berries* (immature) red.

⁶ *Burmeistera dukei* Wilbur, sp. nov. Planta suffruticosa; ramuli puberuli. Lamina foliorum elliptica, 4–15 cm longa et 1.8–6.0 cm lata, 2–3-plo longiora quam lata, acuta ad apicem et basi cuneata, margine serrulata 1–2 serrulatis per cm; petioli puberuli, 0.5–1.8 cm longi. Flores 2.2–2.5 cm longi; pedicelli puberuli, 2.5–4 cm longi. Hypanthium cylindricum, spiculatum vel puberulum, 4–5 mm longum et 2.5–3.5 mm latum; lobi calycis lanceolati vel oblongi, denticulata, puberuli, 3.5–5 mm longi et ca. 2.5 mm lati. Corolla puberula, virenta; tubus 6–7 mm longus; lobi lineari vel oblongi, superiori 9–11 mm longi, laterali 6–8 mm longi et inferiori ca. 5 mm longi. Filamenta glabra vel sparsissime puberula, 20–22 mm longa; anthearum tubus glaber. Bacca immatura, rubra.

This species from Darién is known only from the type collection.

DARIÉN: Cuasi-Caná Trail between Cerro Campamiento and La Escalera to "Páramo" E of Tres Bocas, cloud forest and mossy forest, *Kirkbride & Duke 1295* (DUKE, MO, REED).

6. *Burmeistera glauca* (F. E. Wimmer) Gleason, Bull. Torrey Bot. Club 52: 98. 1925.

Centropogon glaucus F. E. Wimmer, Repert. Spec. Nov. Regni Veg. 19: 251. 1924. TYPE: Panama, *Pittier 3219* (US, holotype).

Epiphytic, suffrutescent, slender, glabrous *herbs*; stems hollow, to 70 cm long. *Leaves* with blades lanceolate to narrowly ovate, 2.7–5.0(–8.0) cm long, 1.2–2.5 cm wide, mostly 2–4 times as long as wide, glabrous, apically narrowed gradually to a long-acuminate, often falcate tip, basally rounded, marginally shallowly crenate-serrate with 2–4 callose-tipped teeth per cm; petioles 4–7 mm long, glabrous. *Flowers* 3–3.5 cm long; pedicels solitary in the upper leaf axils, spreading, usually stiff, glabrous, ebracteolate, 5–9 cm long; hypanthium in anthesis cylindric, basally rounded, flaring at the summit; calyx lobes deltoid or ovate, blunt, 1.5–2.5 (–3.5) mm long, marginally entire to callose-denticulate, glabrous, erect, green to purplish; corolla glabrous, greenish, purplish or russet red, the tube 15–18 mm long, basally little expanded, the lobes lanceolate, the 2 upper lobes 10–12 mm long, the two lateral lobes 6–8 mm long, the lowermost lobe 5–6 mm long; filament tube ca. 20 mm long, glabrous, basally distinct and adherent to the corolla tube, the anthers 3.5–5.5 mm long, the 2 shorter anthers apically densely fringed with white, pilose trichomes, otherwise all anthers glabrous. *Berries* much inflated, (2–)3–5 cm in diameter, 3–6 cm long, magenta, oblong-ovoid with a truncate apex; seeds fusiform or cylindric, light brown with dark apiculate tips, minutely foveate-reticulate, 0.9–1.2 mm long.

This species is known from the wet montane forests of Chiriquí Province at an elevation of about 1,700–2,500 m. It is known from both east and west of Volcán Chiriquí. Its bladderly, greatly inflated berry is strongly reminiscent of that of *Burmeistera vulgaris*.

BOCAS DEL TORO: Between Quebrada Menaco and Buena Vista on Chiriquí Trail, *Kirkbride & Duke 674* (MO). CHIRIQUÍ: Bajo Mono-Robalo Trail, W slopes of Cerro Horqueta, 5000–7000 ft, *Allen 4818* (MICH, MO). S flank of Cerro Horqueta along high trail to summit, 2100 m, *Cochrane 6275* (MO). Las Nubes, ca. 2000 m, *Croat 26455* (DUKE, MO). Bajo Chorro, 6000 ft, *Davidson 383* (F, GH, MO, US). NE ridge leading to Cerro Horqueta, 1800–1900 m, *Luteyn 3788* (DUKE). Ridge E of Cerro Horqueta, 1700–1900 m, *Luteyn & Wilbur 4620* (DUKE, MICH, MO). Cerro Pando at the Costa Rican-Panamanian border, 2000–2482 m, *Mori & Bolten 7282* (DUKE, MO). Cuestas de Las Palmas, S slopes of Cerro de la Horqueta, 1700–2100 m, *Pittier 3219* (US). Cerro Colorado, continental divide 50 km N of San Félix, 1400 m, *Mori & Dressler 7858* (DUKE, MO). N of San Félix at Chiriquí-Bocas del Toro border on Cerro Colorado, 5000–5500 ft, *Mori & Kallunki 5952* (DUKE, MO). Cerro Horqueta, 6500 ft, *von Hagen 2033* (MO). E of Guadeloupe along the Río Chiriquí Viejo, ca. 2 mi NE of Cerro Punta, 7000 ft, *Wilbur & Teeri 13104* (DUKE, F, GH, LL, MICH, MO, NY, US). Beyond Las Nubes, 7500 ft, *Wilbur & Teeri 13209* (DUKE, F, MICH, MO). S slopes of Cerro Horqueta N of Boquete, 6400–6600 ft, *Wilbur et al. 13450* (CR, DUKE, F, GH, LL, MICH, MO, NY, PMA, US, WIS). 4 mi NW of Boquete, 6000 ft, *Wilbur et al. 13532* (DUKE, MICH, MO). Ridge leading to summit of Cerro Horqueta on southern slope, 6500–7500 ft, *Wilbur et al. 17309* (DUKE, CR, F, GH, LL, MICH, MO, NY,