

- 10'. Corolla glabrous; calyx lobes and hypanthium glabrous; berry white or greenish turning blackish.
11. Upper corolla lobes less than 12 mm long and the 2 lateral lobes about 7 mm long; corolla greenish; anthers externally puberulous 12. *B. pirrensis* Wilbur
- 11'. Upper corolla lobes 18 mm long or longer and the 2 lateral lobes 12–14 mm long; corolla dark red; anthers externally glabrous 3. *B. darienensis* Wilbur
- 8'. Calyx lobes usually more than 5 mm long.
12. Two lower anthers densely bearded apically with a dense tangle of trichomes; leaves mostly 5 cm or more wide; plants of Darién 10. *B. panamensis* Wilbur
- 12'. Two lower anthers sparingly fringed apically or glabrous with not more than a sparse fringe of trichomes; leaves mostly less than 5 cm wide; plants from west of Darién.
13. Corolla green or bronzy; hypanthium and calyx lobes green, drying green or stramineous, rarely suffused with purple or maroon; berry greatly inflated with a thin, bladderly wall, 2–4 cm in diameter and 2.5–5 cm long 16. *B. vulgaris* F. E. Wimmer
- 13'. Corolla predominantly purplish or green with a deep suffusion of maroon or dark purple; hypanthium and calyx lobes purplish and drying dark purplish or blackish; berry fleshy and with a substantial, thick wall, 1–2(–2.5) cm in diameter and 1–2(–3) cm long 2. *B. cyclostigmata* Donnell Smith
- 6'. Hypanthium in anthesis obconic, acutely tapering at the base with the sides strongly divergent.
14. Leaf margins conspicuously denticulate or serrulate with 6 or more teeth per cm X2. *B. mcvaughii* Wilbur
- 14'. Leaf margins entire to inconspicuously serrulate with 4 or fewer teeth per cm.
15. Calyx lobes 5 mm long or more.
16. Stems densely spreading hirsute with the trichomes visible without magnification; calyx lobes spreading or even reflexed, 5–10 mm long, 2.5 mm wide or wider X3. *B. obtusifolia* F. E. Wimmer
- 16'. Stems glabrous or inconspicuously appressed pubescent; calyx lobes ascendent, (7–)11–20 mm long, 2 mm or less wide 13. *B. tenuiflora* Donnell Smith
- 15'. Calyx lobes less than 4 mm long.
17. Corolla tube puberulent or inconspicuously appressed short-pubescent.
18. Pedicels and hypanthia glabrous to moderately spiculate or appressed short-pubescent or even strigillose; Panama east of Volcán Chiriquí 4. *B. dendrophila* F. E. Wimmer
- 18'. Pedicels and hypanthia moderately to densely spreading short-pubescent; Panama west of Volcán Chiriquí 15. *B. utleyi* Wilbur
- 17'. Corolla tube glabrous.
19. Filaments distally glabrous; anther tube externally glabrous; upper corolla lobes 7 mm long 14. *B. toroensis* Wilbur
- 19'. Filaments distally puberulous; anther tube externally puberulous; upper corolla lobes 10 mm long or longer 4. *B. dendrophila* F. E. Wimmer

X1. *Burmeistera hammelii* Wilbur. TYPE: Panama, Darién, NE slope of Cerro Sapo, approach from Garachiné, 3200 ft, *Hammel 7274* (DUKE, holotype; MO and 1 sheet to be distributed, isotypes).

Planta erecta vel scandenta, ca. 1 m alta; ramuli puberuli vel glabrati. Lamina foliorum ovata vel elliptica, 7–19 cm longa, 3.5–9 cm lata, ca. 2-plo longiora quam lata, acuta vel acuminata ad apicem et basi rotundata vel cuneata, margine serrulata 4–9 serrulatis per cm; venulosi infra strigillosi; petioli puberuli, 0.8–4 cm longi. Flores 3–4 cm longi; pedicelli glabri, 3–4 cm longi. Hypanthium cylindricum

vel obconicum, glabrum, 4–5 mm longum, 3–4 mm latum; lobi calycis deltoidi vel oblongi, acuti vel obtusi, denticulati, glabri, 2–3 mm longi. Corolla glabra, virenta; tubus 1.5–2 cm longus, ca. 2–3 mm diametro; lobi lineari vel oblongi, superiores 12–16(–18) mm longi, laterati 7–9 mm longi, inferiores 5–6.5 mm longi. Filamenta glabra vel puberula, 22–27 mm longa; tubus antherarum appressi-pilosus, 4–6 mm longus. Bacca globosa, 5–6 mm longa, 6–8 mm lata.

Erect to scandent *herb* to 1 m tall; branches inconspicuously puberulous to glabrate. Principal *leaves* with blades ovate to broadly elliptic, 7–19 cm long, 3.5–9 cm wide, ca. 2 times as long as wide, apically acute to more typically acuminate, basally rounded to somewhat cuneate, marginally conspicuously serrate throughout with ca. 4–6(–9) teeth/cm each ca. 1–1.5 mm long, glabrous on the upper surface and densely strigillose along the veins beneath; petioles 0.8–4 cm long, sparingly to moderately but always inconspicuously puberulous. *Flowers* 3–4 cm long at anthesis; pedicels solitary in the axils of the reduced (1.5–4 cm long) upper leaves and thus racemous, strongly ascendent to wide spreading, glabrous, 3–4 cm long, 1–2 mm in diameter, ebracteolate; hypanthium in anthesis cylindrical to obconic, glabrous, basally acute to rounded, 4–5 mm long, 3–4 mm in diameter medially; calyx lobes deltoid to oblongish, acute to obtuse, denticulate, glabrous, 2–3 mm long, 1.5–2 mm wide basally; corolla glabrous, green, the tube 1.5–2 cm long, 2–3 mm in diameter, the lobes linear to narrowly oblong, the upper lobes falcate, 12–16(–18) mm long, the lateral lobes 7–9 mm long, the lowermost lobe 5–6.5 mm long; filament tube glabrous to puberulous, 22–27 mm long, the anthers externally appressed-pilosulose, 4–6 mm long, the lowest anthers slightly pilose-fringed. *Berries* globose, 5–6 mm long, 6–8 mm in diameter.

This species is known only from the type collection made on the Cerro Sapo in Darién. It is named for the collector, Barry Hammel, who through his particular attention to the genus *Burmeistera*, has considerably advanced our understanding of the Panamanian representatives.

X2. *Burmeistera mcvaughii* Wilbur. TYPE: Panama, Chiriquí-Bocas del Toro, border trail along continental divide ca. 5 mi NE of Boquete near Cerro Pate Macho above Palo Alto along trail above 6800 ft, *Hammel 7399* (DUKE, holotype; MO, plus 6 specimens to be distributed, isotypes).

Planta suffruticosa; ramuli puberuli. Lamina foliorum elliptica, 6–12(–16) cm longa, 3–5(–7) cm lata, 1.5–2(–3) plo longiora quam lata, acuta vel acuminata ad apicem et basi acuta vel rotunda, margine serrulata vel denticulata, 6–8 denticulatis per cm; petioli puberuli, 2–3 cm longi; folia juvenilia pinnatifida, 1–3 dissecta. Flores 3.2–4 cm longa; pedicelli puberuli, 4–7 cm longi. Hypanthium obconicum, puberulum, costatum, 5–7 mm longum, 3–5 mm latum; lobi calycis linear vel lanceolati, serrulati, puberuli, 6–8 mm longi, 1–1.2 mm lati. Corolla puberula, virenta; tubus 12–18 mm longus; lobi oblongi vel deltoidi, superiores 10–13 mm longi, laterali 6–7 mm longi, inferiores ca. 5–7 mm longi. Filamenta 22–27 mm longa, puberula; tubus antherarum puberuli. Bacca cylindrica, ca. 15 mm longa, 10–12 mm lata.

Terrestrial, scandent *shrublet* up to 2.5 m long; stems inconspicuously and minutely puberulous above with trichomes 0.1 mm long or less, glabrate below. Principal *leaves* elliptic, 6–12(–16) cm long, 3–5(–7) cm wide, mostly 1.5–2(–3) times as long as wide, apically acute to more typically acuminate, basally acute to rounded, marginally conspicuously serrulate or denticulate throughout with ca. 6–8 teeth/cm each ca. 0.2–0.4 mm long, inconspicuously and sparingly microscopically puberulous on the veins above or glabrate, moderately and incon-