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Huntleya burtii

Text by Noelia Belfort Oconitrillo/Watercolor by Sylvia Strigari

Tribe Cymbidieae
Sutribe Zygopetalinae
Genus Huntleya *Bateman ex Lindl.*

Huntleya burtii (Endrés & Rchb.f.) Pfitzer, *Nat. Pflanzenfam.* 2(6):205. 1889. Type: Costa Rica. June 1867, *A.R. Endrés* s.n. (holotype, W-R). Basionym: *Batemannia burtii* Endrés and Rchb.f., *Gard. Chron.* 1099. 1872. Synonyms: *Huntleya burtii* (Endrés & Rchb.f.) Rolfe, *Orchid Rev.* 24(286):236. 1916. *Zygopetalum burtii* (Endrés & Rchb.f.) Benth. & Hook. f. ex Hemsl., *Biol. Cent.-Amer., Bot.* 3(16):251. 1884.

Epiphytic, erect, caespitose *herbs*, to 45 cm tall, each shoot provided with 12–16 leaves. *Roots* fleshy, glabrous. *Leaves* sessile, distichous, lanceolate to ligulate, acute, 24.0–45.0 × 3.5–5.0 cm, with strongly marked midvein. *Inflorescences* 1–2, each an erect, solitary flower produced from the axils of the central leaves; *peduncle* terete, to 5 cm long, with two membranaceous, cucullate, acuminate bracts. *Ovary* clavate, to 6–8 cm long including the pedicel, subtended by two cucullate bracts to 1.8 cm long, the outer one ovate, acuminate, the inner one linear–lanceolate, acuminate. *Flowers* spreading, fragrant, the sepals and petals tessellated, cinnamon brown, white at the base, the petals basally marked with a large blotch or a fascicle of purple stripes, the lip white turning purple–brown at apex, the callus white with purple bristles. *Dorsal sepal* lanceolate, acute, concave toward the apex, the margins undulate, 4.2–5.0 × 2.0 cm. *Lateral sepals* obliquely ovate–lanceolate, acute, the margins undulate, concave toward the apex, 4.4–5.0 × 2.1 cm. *Petals* obliquely rhombic, acute, acuminate, 3.8–4.5 × 2.0 cm. *Lip* with a cuneate, geniculate claw, the lamina obscurely trilobed, ovate, acute to acuminate, recurved at apex, 2.8–3.0 × 2.0–3.0 cm, contracted at the base and articulated with the callus plate; callus with an erect, semicircular, fimbriate crest. *Column* erect, semiterete from a narrow base, with a distinct foot, 1.7–2.0 × 1.1 cm at the dilated apex, the clinandrium provided with broad lateral wings, deeply cucullate, fimbriate. *Anther cap* cucullate, flattened, rhombic, two-celled. *Pollinia* 4, in two different pairs, narrowly obpyriform to obovate, on a linear stipe; viscidium triangular.

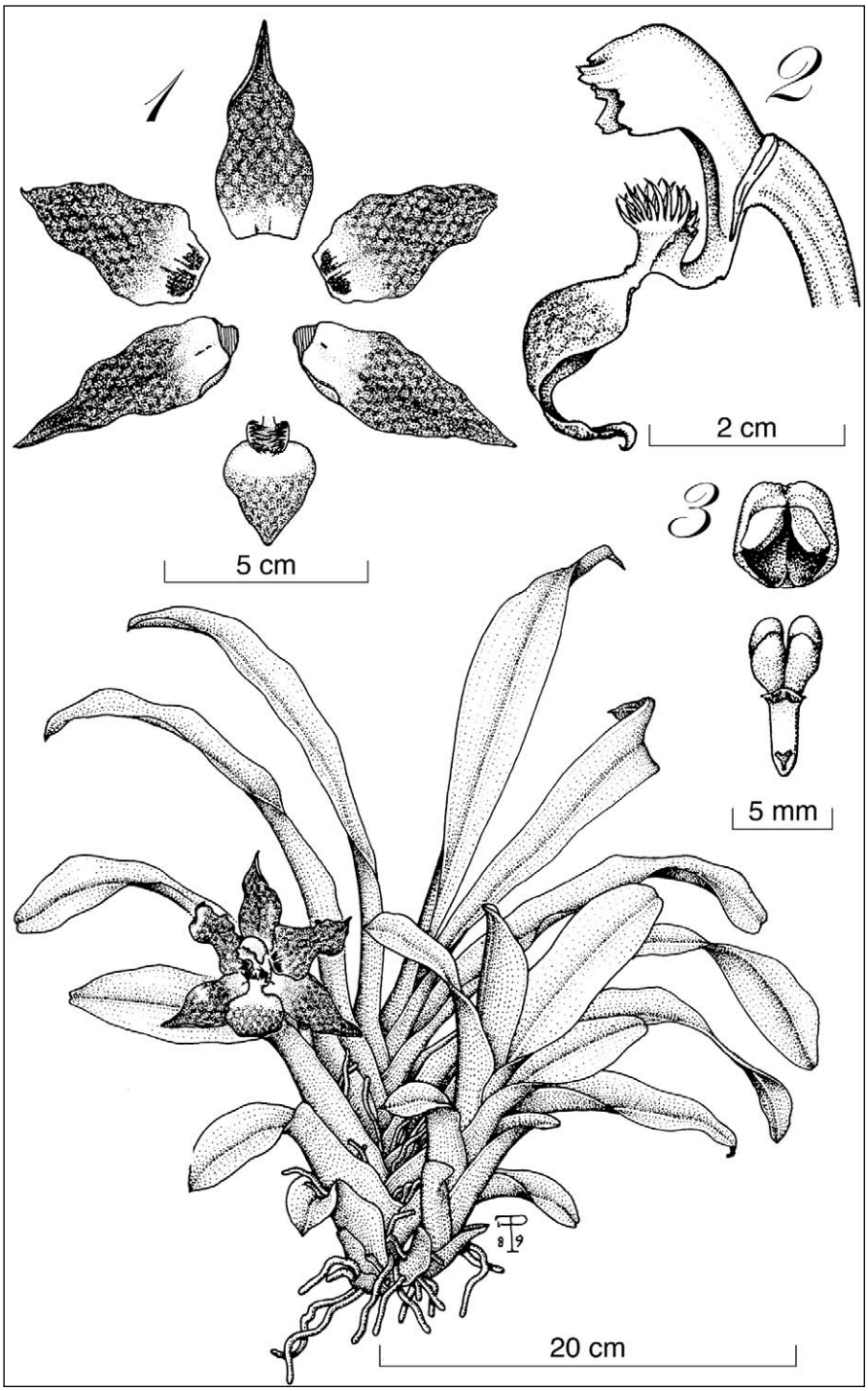
Huntleya burtii, also known as the cat-face orchid, was discovered and collected for the first time by Auguste R. Endrés (1838–1874) in Costa Rica during June 1867. French by birth and German by culture, Endrés was a botanical explorer, author and illustrator who spent years traveling and botanizing in Costa Rica from 1866 to 1874, with a brief time in Panama. He did an immense amount of work during those years, collecting, studying and illustrating orchid plants, most of which were undescribed at the time. He also coauthored the description of about 11 species with his main scientific correspondent, Heinrich Gustav Reichenbach (Pupulin et al. 2010). In 1872, Endrés, together with Reichenbach, described the species as *Batemannia burtii* in *The Gardeners' Chronicle*. They placed the species in *Batemannia* Lindl., a genus that was published by J. Lindley in 1834. According to Reichenbach (1872), the specific epithet honors one of Endrés' acquaintances. Although surely an important person in Endrés' life, there is no clear information about who Mr. Burt was. During the same years spent by Endrés in Costa Rica, a Mr. Burt, gardener to H. B. Mildmay, of Sevenoaks, England, is recorded by the *Journal of Horticulture and Cottage Gardener* as the exhibitor of a well-grown specimen of *Vanda coerulea* Griff. ex Lindl., but the association is purely speculative. What is certain is that the unusual name "Burt" (like the variants Birte, Burte, Bearte) is of Anglo-Saxon origin and is still found chiefly in the southwestern counties of England (Pupulin 2013).

In his original descriptions Endrés said the plant was somehow similar in habit to *Pescatoria cerina*; initially Reichenbach thought the flowers resembled very much those of *Batemannia meleagris* Rchb.f., so much so that he suggested to Endrés they were but a variety. The flowers are brownish; the petals have a white base, and two large black spots, which sometimes all occur on the base of the sepals. The flowers would appear to be constantly longer and broader than those of the true *Btmna. meleagris*; their color is very different, the crest on the top of the column is quite peculiar and the wings of that organ are not triangular, but square. Thus, Reichenbach (1872) finally adopted Endrés' view, that it must be regarded as a distinct species.

Historically, *Btmna. burtii* has been changed from one genus to another since its first description. Bentham and Hooker (1884) transferred it to *Zygopetalum burtii,* a genus that was first described by William Jackson Hooker in 1827. Later in 1889, Ernst Hugo Heinrich Pfitzer included it in *Huntleya* Bateman ex Lindl. as *Hya. burtii* (Pfitzer 1889). Then, Robert Allen Rolfe (1916), overlooking Pfitzer's name, combined the species again in *Huntleya*; however, this name is an isonym.

Indeed, many species of *Huntleya* were originally described as members of the genus *Batemannia*, from which *Huntleya* is distinguished mainly by the absence of pseudobulbs and the shape of the callus, which is long and deeply fimbriate in *Huntleya* versus fleshy, denticulate–ciliate in *Batemannia* (Pupulin 2009, 2010). Studies based on DNA sequences confirm the monophyly of *Huntleya* and show that the genus is only distantly related to *Batemannia*, the latter being sister to *Galeottia* A.Rich. and *Zygosepalum* (Rchb.f.) Rchb.f., as a member of the *Zygopetalum* clade.

Nowadays, *Huntleya burtii* is widely accepted as belonging to the *Huntleya* clade that is distinguished from other clades in the Zygopetalinae by the pseudobulbs reduced or lacking and the conduplicate leaves. The clade also includes the genus *Dichaea* Lindl., *Chaubardia* Rchb.f. and the *Chondrorhyncha* Lindl. complex, in addition to *Cryptarrhena*, which is weakly supported as sister to the *Huntleya* clade (Whitten et al. 2005; Pupulin 2009, 2010). The large plants, lacking pseudobulbs, often with long rhizomes separating the fan-shaped growths, and the large, star-shaped, flat, glossy and fragrant flowers distinguish the genus *Huntleya* among the relatives in the *Huntleya* clade. Phylogenetic analysis of the Zygopetalinae place *Huntleya* as the most basal member of this clade, sister to *Dichaea, Cryptarrhena*, *Chaubardia* Rchb.f. and the other taxa of the *Chondrorhyncha* complex. Among these genera of the *Huntleya* clade, an obvious synapomorphy



Huntleya burtii. The plant.
1. Dissected perianth.
2. Column and lip, lateral view.
3. Anther cap and pollinarium.
All drawn from *Pupulin 88* (USJ) by Franco Pupulin.

(a shared derived character state) is the presence of two floral bracts, greatly different in shape and size. The adaxial bract is larger and cucullate and the inner, apical bract, abaxial to the lip, is smaller and ligulate (Pupulin 2009).

As presently understood, *Huntleya* comprises 13 species ranging from Belize to Brazil, Bolivia and Trinidad, with a main center of dispersal in the northern Andean regions of Colombia and Ecuador, where seven and six *Huntleya* species have been recorded, respectively (Pupulin 2010). Species of *Huntleya* are restricted mostly to extremely wet tropical and premontane forests, usually at medium and low elevations (from sea level to 800–1,000 m), with a few taxa ranging to higher regions up to 2,000 m elevation. Some of the species are remarkably similar in gross flower morphology and difficult to tell apart on the basis of floral differences. Some of them might not withstand critical examination at specific rank.

Huntleya burtii is found from Guatemala to Panama and perhaps ranges to Colombia (Dressler 2003, Pupulin 2010). Plants grow mostly as large epiphytes, restricted to large branches and trunks in shaded positions where the thick rhizome often assumes a creeping habit. The large, scented, long-lasting flowers usually start to bloom in the rainy season, but plants of *Huntleya* may sporadically flower throughout the year. Most species are probably pollinated by male euglossine bees in search of a specific fragrance. Flowering occurs mainly at the end of the dry season, in the months of March–May, with sporadic flowerings also recorded in September and October. *Huntleya burtii* is pollinated by *Eulaema meriana,* which receives the pollinarium behind the head (Pupulin 2010).

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