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Grammatophyllum multiflorum

Text by Melissa Díaz-Morales/Watercolor by Sylvia Strigari

Tribe Cymbidieae
Subtribe Cymbidiinae
Genus Grammatophyllum *Blume*

Grammatophyllum multiflorum Lindl., Edwards's Bot. Reg. 24: 46. 1838. Type: Manila, Philippines; Cuming s.n. (holotype, K; isotype, GOET). Synonyms: *Grammatophyllum multiflorum* var. *tigrinum* Lindl., Edwards's Bot. Reg. 28: Pl. 69. 1842. *Grammatophyllum scriptum* var. *tigrinum* (Lindl.) Holttum, Fl. Malab. 531. 1964. G*rammatophyllum scriptum* f. *citrinum* Valmayor & D.Tiu, Philipp. Orchid Rev. A–V(3): 18. 1983. *Grammatophyllum multiflorum* f. *citrinum* (Valmayor & D.Tiu) D.Tiu, Deciphering Script. Philipp. Grammatophyllum: 53. 2009.

Epiphytic, erect *herb* up to 60 cm tall without the inflorescence. *Roots* flexuous, fleshy, to 3 mm in diameter. *Pseudobulbs* ovoid, complanate, green to bright greenish yellow, 5.0–10.5 × 2.0–4.5 cm, enclosed at the base by 1–3 triangular, acute, papyraceous, brown sheaths. *Leaves* 1–4, conduplicate, oblanceolate, acute, matte green, the midvein strongly protruding on the underside, 41.5–46.2 × 5.8–6.5 cm. *Inflorescence* a basal, erect-arched, simultaneously flowered raceme, exceeding more than twice the length of the leaves, to about 120 cm long; peduncle terete, ca. 30 cm long, covered by 2–4 triangular, acute, clasping bracts. *Floral bracts* triangular, acute, to 2 cm long, pale green, becoming brown with age. *Pedicellate ovary* terete, 6.3–7.1 cm long. *Flowers* up to 100, spreading, with sepals and petals almost solid chestnut brown on a greenish yellow background, the lip yellow striped with brown, the center of the midlobe white, or yellow marked with irregular brown blotches (var. *tigrinum*), or with sepals and petals green-yellow, the lip yellow with white on the midlobe and the keels (f. *citrinum*). *Dorsal sepal* ovate, acute, 2.8–3.0 × 1.1–1.2 cm. *Lateral sepals* ovate, acute, 3.0–3.2× 1.0–1.1 cm. *Petals* broadly oblanceolate, acute, 2.8–3.0 × 0.7–0.9 cm. *Lip* trilobed, 1.3–1.4 × 1.4–1.6 cm across the lateral lobes; side lobes erect, flanking the column, broadly obovate to subfalcate, with the apex revolute; midlobe ovate-subcordate, obtuse, convex, longer than broad; disc with two basal, linear, pubescent keels running to the midlobe of the lip, frequently flanked by two lateral, lower keels. *Column* arcuate, with a distinct foot, about 12 mm long, provided with lateral, semicircular wings. *Anther cap* deeply cucullate, subquadrate, truncate, two-celled. *Pollinia* four, rounded, dorso-ventrally superposed, in two pairs of different sizes, on a broadly rhombic, deeply convex stipe. *Fruit* not seen.

The genus *Grammatophyllum* was described by Karl Ludwig von Blume (1796–1862) for his studies on the flora of Java. The type species for the genus is the remarkable *Grammatophyllum speciosum* Blume, which has many common names like gigantic orchid or queen of the orchids, alluding to the size of the plant. This species is known to be the largest orchid species in the world, at least in term of mass; a large specimen can easily weigh over a ton (909 kg). The genus comprises about 12 species and is mainly distributed in southeastern Asia, from Myanmar to Borneo, the Philippines, New Guinea and the Solomon Islands (Wood 2009).

The story of the species pictured here began with Mr. Hugh Cuming (1791–1865), a very avid collector especially interested in collecting and studying mollusk shells, but who made important contributions to the field of botany as well. Born in England, his interest in these organisms developed from an early age, but it was not until 1819, when he moved to Valparaiso, Chile, that he started his natural collection. A few years later, with the savings from his business, Mr. Cuming bought a yacht specifically built for collecting natural specimens, and then began his expeditions throughout the South Pacific islands. After returning to England, he acquired a certain fame in the eyes of the scientific community, which encouraged him to explore the tropical Eastern Hemisphere. He turned his attention to the Philippine Islands, where he stayed for more than four years (Melvill 1895).

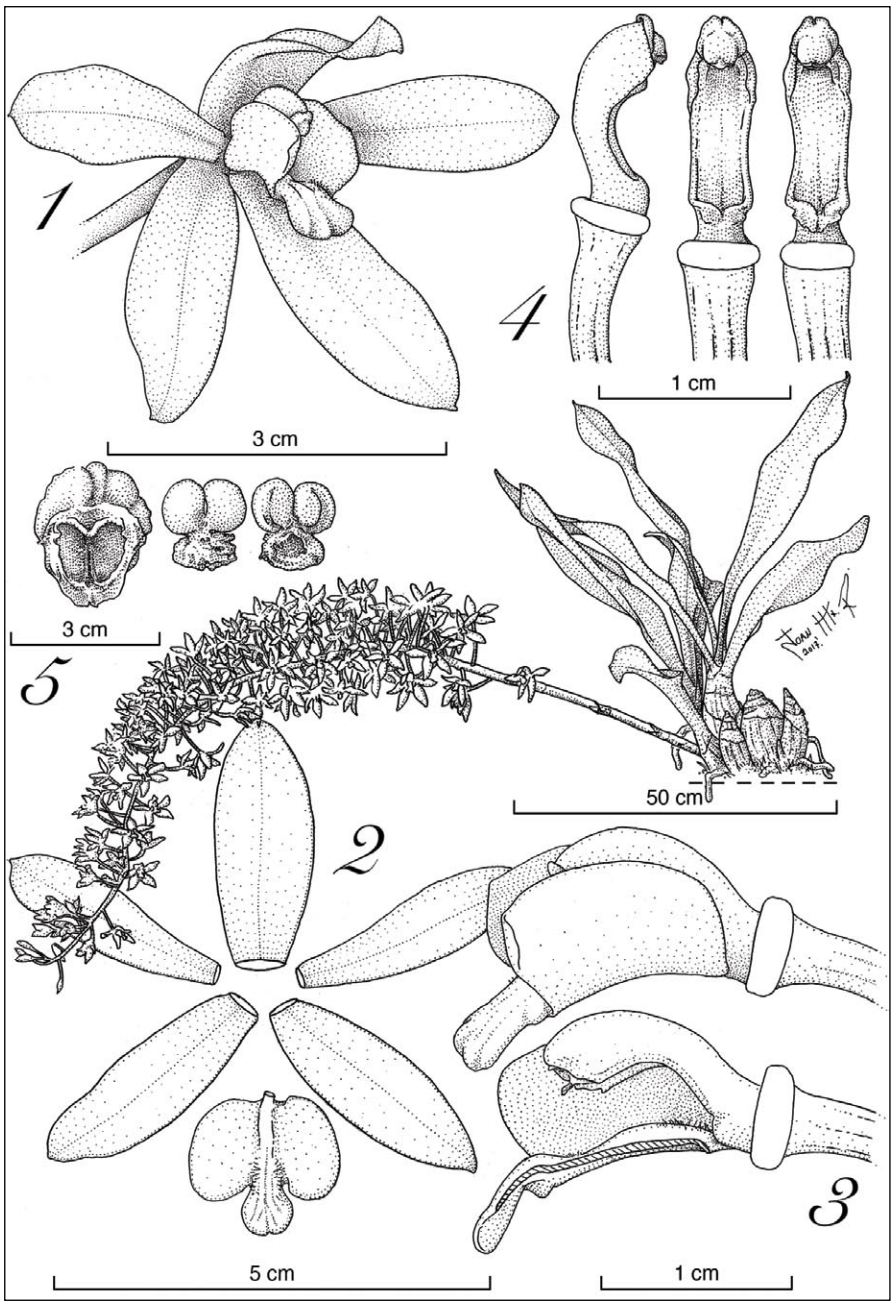
In 1837, Mr. Cuming, a pioneer in the practice of sending living specimens in ships, sent many plants from Manila he believed to be the very famous "letter-plant," *Grammatophyllum speciosum*. One of these plants was acquired by James Bateman (1811–1897) who, in May 1838, when it flowered for the first time, sent it to John Lindley for identification. Lindley described the new species that same year as *Grammatophyllum multiflorum*, arguing that although it belonged to the same genus as the "letter-plant," it was far inferior in beauty.

The name *Grammatophyllum* is derived from the Greek *gramma*, letter, and *phyllon*, leaf, alluding to the conspicuous marking on the sepals and petals of the type species which look rather like letters, while the epithet *multiflorum* refers to the many-flowered inflorescence. The long raceme of this species made Lindley name it the "many-flowered letter-leaf." A year after publishing the new species, Lindley published a plate with the inflorescence and text where he mentioned that it bore 48 flowers; the form here illustrated, originally coming from the Philippines, bore more than 80 flowers.

The green form of this species was described by Helen Valmayor and Danilo Arguson Tiu in 1983 as *Grammatophyllum scriptum* f. *citrinum* based on a plant collected from Bicol, in the southern part of Luzon Island, the Philippines. Even though some authors consider *Grammatophyllum multiflorum* a synonym of *Gram*. *scriptum* (i.e., Davis and Steiner 1952, Quisumbing 1981), most contemporary botanists treat *Gram*. *multiflorum* as a valid taxon endemic to the Philippnies (Cootes 2001 and references therein). Consequently, in 2009, Tiu recombined the *Gram*. *scriptum* f. *citrinum* as a form of the latter species.

Cootes (2001) stated that the yellow form of *multiflorum* can only be found in situ in the Philippines, specifically in the province of Albay from where the type of the form came. On the other hand, Teoh (2016) noted a "green form" of *Gram*. *scriptum* (referred to as *Gram*. *scriptum* f. *album*), whose flowers were considered as sacred by the natives from the Maluku Islands (Indonesia); only women from the highest social status were allowed to wear them in their hair. He also mentioned that the pseudobulbs of this species had several medicinal uses, and the seeds were used to made a "love philter" since it was thought to have aphrodisiac properties.

To clarify whether populations of the "many-flowered letter-leaf" (not only the yellow form, but also the other described forms and varieties) belong to a single, widely distributed species, or to a south-



Grammatophyllum multiflorum. The plant.
1. Flower.
2. Dissected perianth.
3. Column and lip, lateral views.
4. Column lateral, front and ¾ views.
5. Anther cap and pollinia, front and dorsal views.
All drawn from *JBL-08880* (JBL-spirit) by Joan Manuel Ramírez Barquero.

ern, Malaysian and Pacific taxon (*Gram. scriptum*) and to another species endemic to the Philippines (*Gram. multiflorum*), both of which could perhaps present a concolorous form, would probably require a much more exhaustive sampling, both in herbaria and in the field, with a special emphasis on southern Philppinian and northern Bornean populations. If such study should conclude that the plants belong to one single species, its name should be *Grammatophyllum scriptum*, which has priority. The name, in fact, is based on *Epidendrum scriptum* L., which was described referring to the plants that Rumphius (Georg Eberhard Rumph, 1627–1702) called *Angraecum scriptum* and that he illustrated for his studies on the Ambonese flora, posthumously published in 1750. Rumphius' drawing of his *Angraceum scriptum*, "Bonga boki, Angrek Krinsiing," is surely the oldest representation of a species of *Grammatophyllum* ever prepared by a Western botanist, and predates by almost two centuries the first description of the genus.

Grammatophyllum multiflorum stands out from many other species appreciated by hobbyists by the fact that its flowers can last as long as nine months. In nature, this species can be found at elevations up to about 1,640 feet (500 m). In cultivation, *Gram. multiflorum* can be grown in intermediate to warm temperatures conditions. Plants can be grown in baskets or pots large enough to accommodate the size of the plants. They respond well to a mixture of bark, charcoal and peat; however, they do not like frequent repotting. Watering should be ample throughout the year, especially during development of new growth.

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