

Phragmipedium klotzscheanum (Rchb.f.) Rolfe 1896

Klotsch's Phragmipedium

SECTION Himantopetalum



Synonyms

Cypripedium klotzschianum Rchb.f. 1850; *Cypripedium schomburgkianum* Klotzsch ex M.R.Schomb. 1876;
Paphiopedilum klotzschianum (Rchb.f.) Stein 1892; *Selenipedium klotzschianum* (Rchb.f.) Rchb.f. 1854;
Selenipedium schomburgkianum (Klotzsch ex M.R.Schomb.) Desbois 1888³

Description

A small sized, hot to cool growing terrestrial with 4 to 8, held in a fan, coriaceous, glabrous, distichous, imbricate, narrowly linear, apically bilobed leaves that blooms in the summer on a one to

occasionally, successively few flowered, erect, hirsute-glandulous, 10 to 24" [25 to 60 cm] long inflorescence with a few distant, ovate-lanceolate, acute to subacute bracts.³

Small to large terrestrial, lithophytic or epiphytic *herbs* with elongate, fibrous roots arising from a short to elongate rhizome. Erect *shoots* leafy, clustered or less frequently well-spaced, glabrous, the base enclosed by two to four sheathing sterile bracts, three- to several-leaved above. *Leaves* several, coriaceous, conduplicate, spreading or sabered, ligulate, elliptic, or oblong, obtuse to acute, often tridentate at apex, mid- to dark green on upper surface, lighter green below, glabrous, ciliate or not on the margins. *Inflorescence* terminal, occasionally branching, few- to many-flowered; *rachis* terete, hairy, glandular or glabrous; bracts conduplicate, elliptic, lanceolate, ovate or oblong, green, sometimes spotted or Hushed or striped with purple, ciliate or not. *Flowers* deciduous, usually showy, concolorous or not, vernation imbricate; pedicel obscure to short; ovary trilocular, three-ribbed, glabrous or hairy. *Dorsal sepal* erect to hooded over lip, ovate, lanceolate, obovate or elliptic, obtuse, acute or acuminate, glabrous or pubescent on the outer surface, sometimes pubescent within at base, ciliate or not. *Lateral sepals* usually fused to form a concave synsepal that is more or less similar to the dorsal sepal, sometimes keeled on outer surface. *Petals* free, spreading or pendent, flat, reflexed or spiraling, elliptic, ovate, lanceolate, linear-lanceolate, linear or oblanceolate, rounded, obtuse, acute or acuminate at apex, often pubescent in basal half within, usually ciliate. Lip deeply pouched and inflated, slipper-shaped or urn-shaped, with more or less pronounced incurved side lobes, rarely petaloid, hairy within especially on lower surface, glabrous or hairy on outer surface; front margin incurved or not. Column short, stalked, porrect; anthers two, bi-ocular, borne on short obtuse to acute filaments; pollen powdery or viscid; staminode terminal on column, sessile or shortly stalked, transversely reniform, oblong, ovate, obcordate or linear, flat, convex or longitudinally conduplicate, glabrous to papillose or finely pubescent, ciliate or not; stigma stalked, dependent, tripartite, more or less papillose. Capsule erect to pendent, three-ribbed, cylindrical to almost ellipsoidal.⁵

Range and Habitat

Found in Venezuela, Guyana and Brazil in sand among boulders near rivers and streams at elevations of 400 to 1800 meters.³

The border region between Venezuela, Brazil, and Guyana, at 3936-4592 ft. (1200-1400 m). The plants usually grow on shady, grassy, south-facing slopes protected from full sun. They are found in granite-rock crevices often near waterfalls, and on sandstone tablelands near water where they are often subject to seasonal flooding. The habitat may have a pH as low as 4.5. -- Source: Charles Baker.⁴

F-1 Hybrids and Progeny

Phragmipedium klotzscheanum has been used in 12 F-1 crosses. Of these, 10 are primary crosses with *Phragmipedium* species.

Phragmipedium klotzschianum has 18 progeny in 2 generations. The first cross was made in 1901. The most awarded were *Phragmipedium Summer Fire* (*lindleyanum* x *klotzschianum*) created by D. Pulley in 1994 and *Phragmipedium Alien Syndrome* (*klotzschianum* x *humboldtii*) created in 2005.



Phragmipedium Summer Fire AM/AOS



Phragmipedium Alien Syndrome AM/AOS



Phragmipedium Colorado Mission HCC/AOS

A cross with *Phragmipedium schlimii*, registered as *Phragmipedium Colorado Mission* in 1994, is dominated by the *schlimii* parent. It received an HCC in 2007.

Phragmipedium klotzecheanum has 1 JC from 1974. Its progeny have garnered 6 awards in 2 generations.

Culture

Phragmipediums are New World ladyslipper orchids that grow from Mexico through central South America. Most are terrestrial (grow in the ground) or lithophytic (grow on rocks), but a few species can sometimes be epiphytic (grow on trees). The tree dwellers are primarily the long-petaled caudatum types. Some species prefer to grow in the splash zone of waterfalls and on streambanks and can often be submerged during periods of heavy rain. These streams and waterfall dwellers include the species caricinum, kaieteurum, klotzschianum, lindleyanum, longifolium, pearcei, and sargentianum. Phrags flower at various times but most heavily in the late winter and spring. Mature plants of many sequential-blooming species can be in bloom for six months or more.

Light. Light needs for Phrags range from bright (cattleya-like, 3,000 to 4,000 footcandles) for the long-petaled caudatum types and xerophyticum, to medium low (Phal-like or mottled leaf Paph-like, 1,500 to 2,000 footcandles) for besseae and schlimii.

Growing these lower light Phrags on a lower bench in a greenhouse usually provides both the reduced light levels and somewhat cooler temperatures they prefer.

Temperature: Most Phrags prefer intermediate temperatures with nights in the upper 50's to the mid 60's. However, besseae and schlimii can tolerate and even prefer somewhat cooler temperatures. If kept much cooler in the winter, keep them somewhat drier as well, not soggy wet. Phrag xerophyticum prefers temperature on the warmer end of the ranges given above.

Humidity and air circulation: Grow in humidity above 50 percent if at all possible. Plant groupings on pebble-trays with water between the pebbles is very helpful when growing in the home. Caudatum types are most tolerant of less humidity, as long as the roots remain moist. Constant air circulation, especially in a greenhouse or grow room is very important. In higher humidity growing areas such as these, growths that do not dry out by evening can develop a bacterial rot. Constant air circulation can help prevent this problem. If a problem does occur, pull off the infected leaves and use a bactericide. This problem can occur on any Phrag but is most prevalent on caudatum types and their hybrids.

Water: Good quality water is very important for growing Phragmipediums. Tap water with low dissolved solids is OK, but rain water or reverse osmosis (R.O.) water is usually even better. Flush the media and roots well each time you water. Most Phrags should be kept moist at all times; however, the caudatum types and xerophyticum can become somewhat drier between waterings. Some people have great success growing their moisture-loving Phrags sitting them in saucers of water. To help prevent bacterial rot problems do not water over the tops of the plants on cool, cloudy days if the growths will not dry out by evening.

Fertilizer: In general, Phrags can take more fertilizer than Paphs, but feeding too heavily can cause leaf tip burn. When using rain or R.O. water be sure to use a fertilizer with essential micro-nutrients, such as Dyna-Grow. I prefer using water-soluble or liquid fertilizers at one-fourth to one-half the recommended strength for three or four waterings then flushing thoroughly with clear water every fourth or fifth watering. Less fertilizer and/or a blossom booster (higher phosphorous) fertilizer should be used in the fall and winter.⁶

References

Aldridge, Peggy. 2008. *An Illustrated Dictionary of Orchid Genera.* Selby Botanical Garden Press.

¹**la Croix, Isobyl. 2008.** *The New Encyclopedia of Orchids.* Timber Press

²Meisel, Kaufmann, Pupulin 2014. *Orchids of Tropical America*. Cornell University Press

³Jay Pfahl's IOSPE at www.orchidspecies.com

⁴OrchidWiz.Database X5.0

⁵ Chase MW. 2006. Cyripedioideae. In: Pridgeon AM, Cribb PJ, Chase MW, Rasmussen F, eds. *Genera Orchidacearum, Vol. 1*. Oxford: Oxford University Press, 153-161.

⁶<http://slipperorchid.org>

<http://apps.kew.org/wcsp/qsearch.do>

<https://secure.aos.org/aqplus/SearchAwards.aspx>