

# Paphiopedilum Pfitz. 1886

## SUBFAMILY Cyripedioideae.

ETYMOLOGY: Venus Slipper - Paphia another name for Aphrodite - refers to the beauty of the flower<sup>3</sup>

SYNONYMS: Cordula Raf. 1838 [1836]; `Menephora Raf. 1836[1838]; `Stimegas Raf. 1836[1838]<sup>3</sup>

TYPE SPECIES: *Paphiopedilum insigne* [Lindley]Pfitz 1888

DESCRIPTION: Small to large terrestrial, lithophytic or epiphytic herbs; roots elongate, fibrous; rhizome short to elongate. Shoots short, erect, leafy, clustered or less frequently well-spaced, glabrous, the base enclosed by two to four sheathing sterile bracts, three- to several-leaved above. Leaves one to several, coriaceous, conduplicate, spreading or suberect, ligulate, elliptic, or oblong, obtuse to acute, often tridenticulate at apex, green, bluish green or chequered or tessellated with dark and lighter green on upper surface, lighter green below, sometimes finely spotted or flushed with purple at base or all over, glabrous, ciliate or not on the margins. Inflorescence terminal, one- to many-flowered; rachis terete, hairy, glandular or glabrous; bracts conduplicate, elliptic, lanceolate, ovate or oblong, green, some-times spotted or flushed or striped with purple, ciliate or not. Flowers usually showy, concolorous or bicoloured; pedicel obscure to short; ovary unilocular, 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 spiralling, 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, hairy within especially on lower surface, glabrous or hairy on outer surface; front margin incurved or not. Column short, stalked, porrect; anthers two, bilocular, 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.<sup>3</sup>

DISTRIBUTION: This genus of about 125 species occurs in SE Asia and the Pacific Islands out to the Solomon Islands<sup>3</sup>

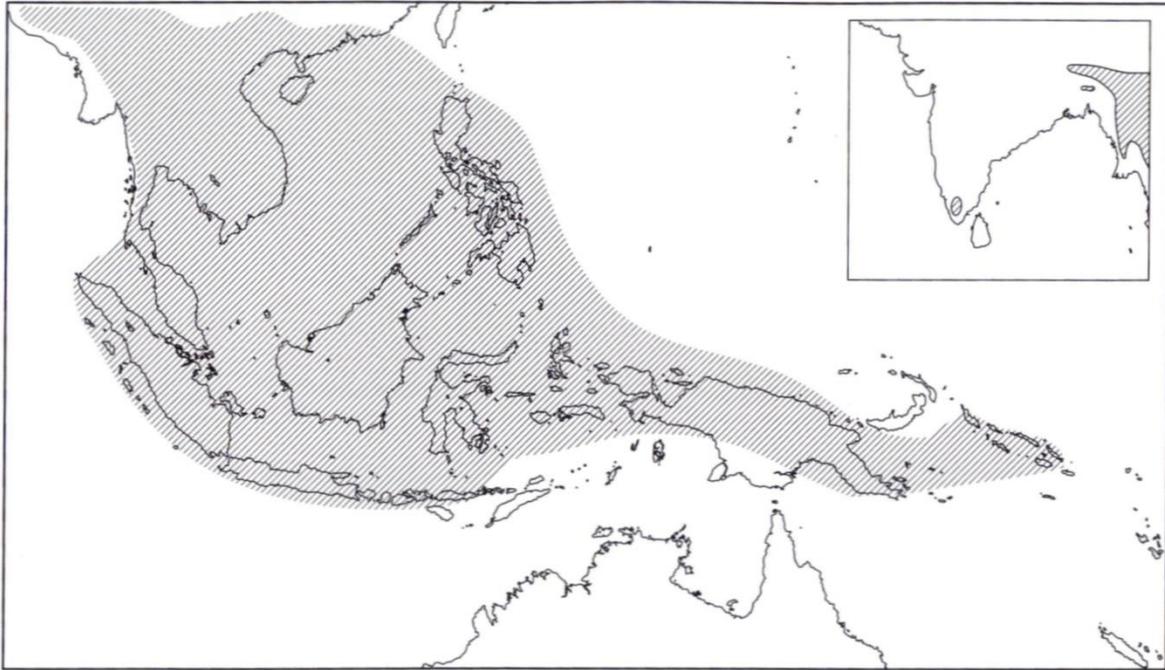


Fig. 5.2. Distribution map of *Paphiopedilum*.

## Culture

**Light** is easier to provide for paphiopedilums than many other types of orchids. They require shady conditions, as in the home in an east or west window, or near a shaded south window. In the greenhouse, shade must be provided. Give about 1,000 to 1,500 foot-candles. In the home, fluorescent lighting is excellent; suspend two or four tubes 6 to 12 inches above the leaves.

**Temperatures** for paphiopedilums cover a considerable range. Paphiopedilums are traditionally separated into two groups: the warm-growing mottled-leaved types and the cool-growing green-leaved types. A third, increasingly popular group is the warmer-growing strap-leaved multifloral paphiopedilums. Warm-growing types should be kept at 60 to 65 F during the night, and 75 to 85 F or more during the day. Cool-growing types should be kept at 50 to 60 F during the night and 75 to 80 F during the day. However, many growers raise all plants in the same temperature range with excellent results. The plants can stand night temperatures in the 40s if necessary (as when grown outside in mild climates), as well as temperatures to 95 F. Care must be taken to protect the plants from rot when cold (keep humidity low, and avoid moisture on leaves or in the crowns of the plants), and also to protect from burning when hot (shade more heavily and increase humidity and air movement around the plants).

**Water** must be available at the roots constantly, because all plants in this genus have no pseudobulbs. All of these plants need a moist medium - never soggy, but never dry. Water once or twice a week.

**Humidity** for paphiopedilums should be moderate, between 40 and 50 percent, which can be maintained in the home by setting the plants on trays of gravel, partially filled with water, so that

the plants never sit in water. In a greenhouse, average humidity is sufficient. Using an evaporative cooling system in warm climates can increase the humidity. Air movement is essential, especially when humidity is high.

**Fertilize** on a regular schedule, but care must be taken to avoid burning of the fleshy, hairy roots. High-nitrogen fertilizers (such as 30-10-10) are recommended when potted in any fir-bark mix. In warm weather, some growers use half-strength applications every two weeks; others use one-quarter strength at every watering. It's important to flush with clear water monthly to leach excess fertilizer, which can burn roots. In cool weather, fertilizer applications once a month are sufficient.

**Potting** should be done about every two years, or as the medium decomposes. Seedlings and smaller plants are often repotted annually. Mixes vary tremendously; most are fine- or medium-grade fir bark, with varying additives, such as perlite (sponge rock), coarse sand and sphagnum moss. Moisture retention with excellent drainage is needed. Large plants can be divided by pulling or cutting the fans of the leaves apart, into clumps of three to five growths. Smaller divisions will grow, but may not flower. Spread the roots over a small amount of medium in the bottom of the pot and fill with medium, so that the junction of roots and stem is buried 1D 2 inch deep in the center of the pot. Do not overpot; an average plant should have a 4- to 6-inch pot.<sup>5</sup>

## References

<sup>1</sup> Jay Pfahl's IOSPE at [www.orchidspecies.com](http://www.orchidspecies.com)

<sup>2</sup> **Aldridge, Peggy. 2008.** *An Illustrated Dictionary of Orchid Genera*. Selby Botanical Garden Press.

<sup>3</sup> **Chase MW. 2006.** Cyripedioideae. In: Pridgeon AM, Cribb PJ, Chase MW, Rasmussen F, eds. *Genera Orchidacearum, Vol. 1*. Oxford: Oxford University Press, 105-161.

<sup>4</sup> **la Croix, Isobyl. 2008.** *The New Encyclopedia of Orchids*. Timber Press

<sup>5</sup> <http://www.aos.org/orchids/culture-sheets/paphiopedilum.aspx>