The Genus Cypripedium, Linnaeus, Sp. Pl.: 951 (1753).
Type: Cypripedium [Cyp.] calceolus [sip-ree-PEE-dee-um kal-see-OH-lus]

Cypripedium calceolus

Cypripediums are one of the most primitive of the Orchidaceae and other than, Paphiopedilum, Phragmepidilum and Selenipedium, have no other common ancestors or links and as such will not procreate with other orchids outside of its Subfamily. There are 189 species and 8 natural hybrids (OrchidWiz [update Dec 2018]), they are almost always terrestrials that are found in dry to wet, mid to upper elevation, bogs, marshes, and scrub (rarely on moss covered rocks or low tree trunks) in northern sub-arctic and temperate zones (Europe, Asia, and North America). The most southern areas being in Mexico and Guatemala, Northern Pakistan, Bhutan, Nepal to Myanmar. These erect, rhizomotous, showy plants have short to long, often hairy, unbranched stems (usually less than 1 meter (3 feet) tall), each with one to several, deciduous, often pleated lanceolate leaves. The flowers are often prominently veined, smooth textured or covered with soft hairs, the slender, solitary to few flowered terminal inflorescences has yellow-green, white, deep maroon-purple to pink flowers. The erect to porrect over the lip dorsal sepal has an entire or wavy margin, the lateral sepals are united forming the synsepal, and the spreading, narrow, linear-lanceolate petals are sometimes twisted. The stalkless, slipper or sac-shaped lip, colored differently from the other segments, has an in-rolled margin and is somewhat grooved along the veins. The staminode peltate-ovate or trowel shaped; anthers two, behind the staminode and beneath the short column

Generally, you would point scale using the Paphiopedium point scale.

Table of species with 11 or more F1 progeny (OrchidWiz – Dec 2018 update)

Species marked with a * are used the most in hybridization						Progeny	AOS Awards										
Kew Name	**Section**	**Subsection**	**Habitat, Country**	**Temp**	**Season**	**F1/Total**	**FCC**	**AM**	**HCC**	**JC**	**AD**	**AQ**	**CCE**	**CCM**	**CHM**	**CBR**	**Total**
Cypripedium calceolus	Cypripedium	Cypripedium	Europe, Asia	Cold to cool	Apr - May	25/37								3			3
Cypripedium candidum	Cypripedium	Cypripedium	Eastern North America	Cold to cool	May	13/16			1							1	2
Cypripedium cordigerum	Cypripedium	Cypripedium	Himalayian area	Cold to cool	Jun	12/16											0
Cypripedium fasciolatum	Cypripedium	Cypripedium	Central China	Cold to cool	Apr	27/46											0
Cypripedium flavum	Obtusipetala		West and Central China	Cold to cool	May	11/18											0
Cypripedium franchetti	Cypripedium	Macrantha	Central and Southeast China	Cold to cool	Jun	13/16									1		1
Cypripedium henryi	Cypripedium	Cypripedium	Central China	Cold to cool	Mar-May	16/19							1	1	1	1	4
Cypripedium kentuckiense	Cypripedium	Cypripedium	Southern USA	Cold to cool	Apr	24/35		3	1	2				2	3		11
Cypripedium macranthos*	Cypripedium	Macrantha	North east Europe, Northern Asia	Cold to cool	May	63/91									4		4
Cypripedium parviflorum	Cypripedium	Cypripedium	North America	Cold to cool	May	55/86		8	3					5	4	2	22
Cypripedium reginae	Obtusipetala		North Eastern North America	Cold to cool	May-Jun	25/31		1							2		3
Cypripedium tibeticum	Cypripedium	Macrantha	West and Central China	Warm to Hot	May-Jun	38/42		1							2		3

Key: Cold – 50 to 58F at night; Cold to cool – 50 to 66F at night; Cool – 58 to 66F at night; Cool to warm – 58 to 75F at night; Cool to Hot – 58 to 85F at night; Warm – 66 to 75F at night; Warm to Hot – 66 to 85F at night; Hot – 75 to 85F at night

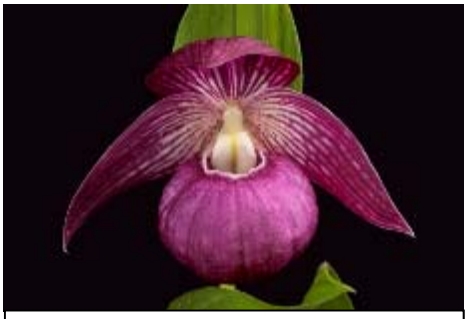
Even though the genus Cypripedium has not been heavily hybridized, 36 of the 189 known species have never been used in hybridization. Of the 53 AOS awards granted to the above group, 20 awards (38%) have been AOS quality awards. Is there room for new discoveries? Certainly appears to be the case, with over 100 newly discovered species in the past few years.

The genus Cypripedium is divided into 11 Sections with the section Cypripedium being further divided into 2 subsections. Most of the breeding and awards have been to plants in the Cypripedium section. Did not 'dig' into the differences between these groupings.

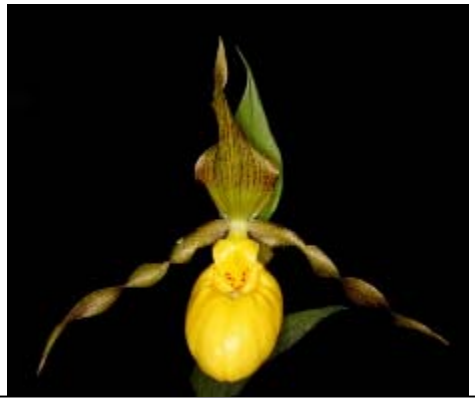
Since species reports will be made on most of the species in the above table, the remaining report will be findings from 'trolling' the above table / database

Most total progeny

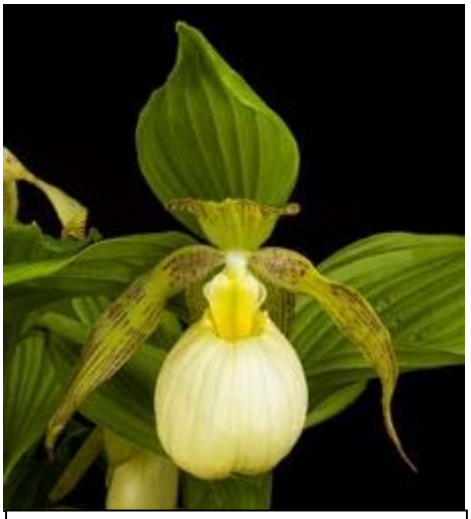
1. Cyp. macranthos, 63 F1 and 91 total progeny
2. Cyp. parviflorum, 55 F1 and 86 total progeny
3. Cyp. fasciolatum, 27 F1 and 46 total progeny



Cypripedium macranthos
'Roberts' CHM/AOS
Jun 2014, NS 7.1 x 5.0 cm
63 F1 and 91 total progeny
4 CHM/AOS awards



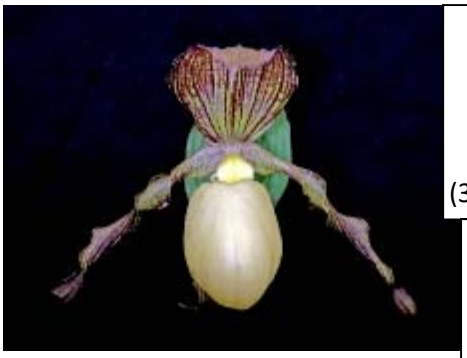
Cypripedium parviflorum var. pubescens
'MoJo' AM/AOS
May 2016, NS 11.5 x 9.6 cm
55 F1 and 86 total progeny
22 AOS awards
(8 AMs, 3 HCCs, 5 CCMs, 4 CHMs, 2 CBRs)



Cypripedium fasciolatum
'Cove's End Again' AM/AOS
Apr 2014, NS 10.7 x 10.7 cm
27 F1 and 46 total progeny
2 AOS awards
(1 AM, 1 CHM)

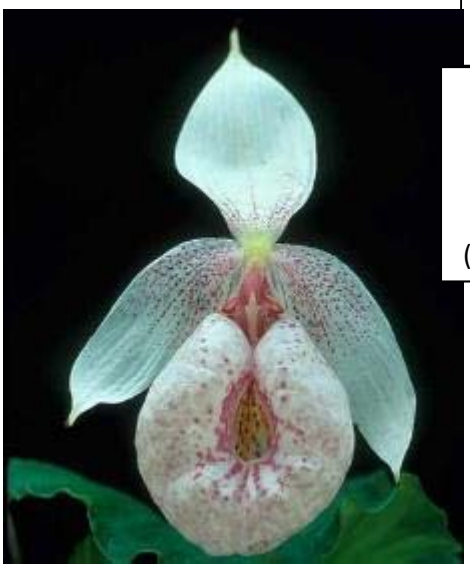
Most total awards (OrchidWiz and AOS)

1. Cyp. parviflorum, 25 Awards, 22 AOS awards of which 11 were quality awards (picture above)
2. Cyp. kentuckiense, 24 Awards, 11 AOS awards of which 6 were quality awards
3. Cyp. Gisela (Cyp. parviflorum x Cyp. macranthos), 12 Awards, 7 AOS awards of which 7 were quality awards
4. Cyp. formosanum, 9 Awards, 5 AOS awards of which 2 were quality awards
5. Cyp. Sabine (Cyp. fasciolatum x Cyp. macranthos), 8 Awards, 5 AOS awards of which 5 were quality awards

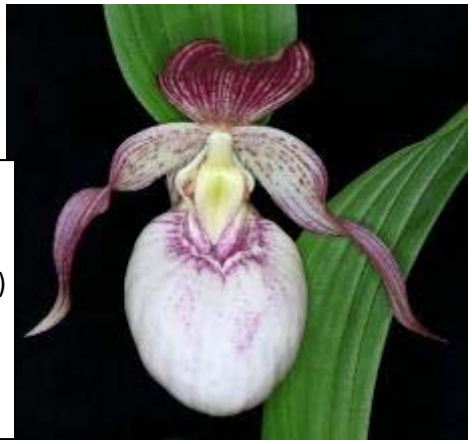


Cyp. kentuckiense
'Roberts' AM/AOS
Jun 2018, NS 12.3 x 8.9 cm
24 F1 and 35 total progeny
11 AOS awards
(3 AMs, 1 HCC, 2 JCs, 2CCMs, 3CHMs)

Cyp. Gisela
'Syzygy' AM/AOS
May 2015, NS 9.7 x 8.5 cm
(Cyp. parviflorum x Cyp. macranthos)
1992, W. Frosch
7 F1 progeny
7 AOS awards (1 AM, 3 HCCs, 2 CCMs, 1 AD)



Cyp. formosanum
'Sycamore Springs' AM/AOS
Apr 2005, NS 6.9 x 10.7 cm
8 F1 progeny
5 AOS awards
(1 AM, 1 HCC, 2 CCMs, 1 CBM)



Cyp. Sabine
'Orchid Court' AM/AOS
Apr 2018, NS 9.0 x 7.2 cm
(Cyp. fasciolatum x Cyp. macranthos)
2002, W. Frosch
12 F1 progeny
5 AOS awards
(3 AMs, 2 HCCs)

Progeny Observation

1. 197 species and natural hybrids (approximately over 100 new in the ~ 10 years)
2. 180 primary hybrids, only 7 primary hybrids registered in the past 3 years
3. Since there are over 448 Cypripedium members, that leaves 71 2nd generation or higher progeny. Clearly breeding has just started.

References:

www.orchidspecies.com
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Interesting Tidbits

The Table below list the two intergeneric crosses made with Cypripedium and the number of cross that exist:

Cyp Contained in 2 Genera:						
#	Composition	Name	Abbrev.	Members	Flowers	Nat.Spr
2	Cyp x Paph	Cyphiopedilum	Cphd	1		
2	Cyp x Phrag	Cyphragmipedium	Cgd	1		

Cypiopedilum Unnamed 1 (Paph. exul x Cyp. calceolus), 1899, Swan, no progeny, no awards

Cyphragmipedium Unnamed 1 (Cyp. calceolus x Phrag. Sedenii), 1899, Swan, no progeny, no awards

As the table above points out, there has essentially been NO intergeneric crosses made. I personally question whether any viable seed was every obtained by Swan when these crosses were made. And if the crosses were made I suspect since the crosses were NOT named that the flowers were NOT attractive and / or they did not survive.

Species Data Sheet

Cypripedium reginae Walter, Fl. Carol.: 222 (1788)

[sip-ree-PEE-dee-um rej-JYE-nee]

Cypripedium reginae is a robust, up to 3 ft (90 cm) tall, cold growing terrestrial from Northeastern and North central North America (From Saskatchewan / Arkansas to Atlantic coast area). It is commonly found on the margins of wet bogs and has a stem carrying 3 to 7, ovate-lanceolate, suberect to spreading, plicate, subacute leaves 4 to 10 in. (10-25 cm) long by 2.5 to 6 in. (6-16 cm) wide with undulate margins, sheathing the stem at the base. The slender, terminal inflorescence is erect with 1 to 3 (rarely 4) color variable 3.0 in. (7.3 cm) wide flowers subtended by a leafy bract that appear in the spring through early fall (June to August).

Cypripedium reginae
'Cotton Candy' AM/AOS
Jun 2007, NS 7.4 x 7.9 cm

Sometimes known as the queen's lady-slipper, fairy queen, white wing moccasin, or simply the pink-and-white Cypripedium. Cypripedium reginae is often consedered the most beautiful of the Cypripedium species.

It is the state flower of Minnesota (protected by state law passed in 1925) and the provincial flower of Prince Edward Island.

Cypripediums are difficult to cultivate with success occuring by the creation of artifical bogs. There has also been success in controlling the time of blooming by light (lack of) and temperature control (31°F or -0.5°C) until approximately 5 weeks prior to desired blooming time.

It is interesting that the seeds of Cypripedium reginae (and probably most Cypripediums) need a cold storage (~41°F) for two to five months prior to successful germination. This clearly sets the range in the wild.

Cypripedium reginae f. album

Synonyms:

No significant names recently.

Varieties / forms:

Cypripedium reginae f. albolabium – no description available, maybe be just a blush of pink on lip or no yellow or dark spots on the lip

Cypripedium reginae f. album – alba form

Awards:

Cypripedium reginae has received only one quality and two cultural AOS awards, details listed in table below:

	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS		1						2		**3**
Year(s) Awarded		2007						2007-2009		

Breeding Characteristics:

Although there has been 25 F1 and 31 total progeny of Cypripedium reginae, I was only able find pictures for one progeny. Based on a sample of one, it appears that Cypripedium reginae is dominant for both floral shape and color.

A indication of interest in breeding with C. mossiae is shown in the following table:

	Registration decade													
Cattleya mossiae	**<1890**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**
Crosses Registered											1	3	18	9
Awards to Crosses Regtr											0	2	0	0

As shown in the above table interest in Cypripedium reginae hybridization started around 1990 with the first hybrid occurring in 1987 and the second in 1992. Only one hybrid has been awarded or used for breeding, first 2nd generation hybrid registered in 2006.

Only Awarded Hybrid:

Cyp. Ulla Silkens
'Ooh La La' AM/AOS
May 2017, NS 7.5 x 6.5 cm

Cypripedium Ulla Silkens (Cyp. flavum x Cyp. reginae), 1996, J. Petersen, 8 F1 progeny, 2 AOS awards (1 AM, 1 CHM). No major progeny.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
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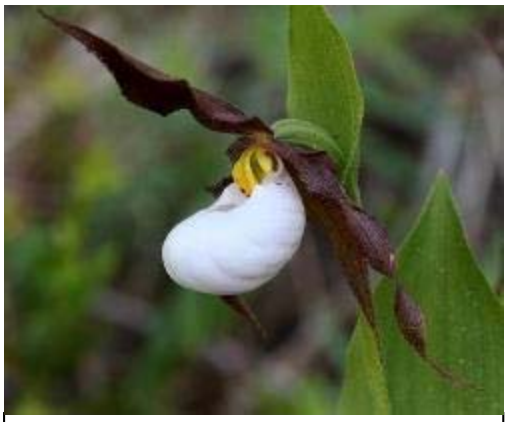
Bulletin, Sep. 1987, *Sterile Propagation of Cypripedium reginae From Seeds*, Ballard, W. W.; V. 56, pp. 935-945
Bulletin, May 1976, *Cultivation of Cypripedium calceolus and Cypripedium reginae*, Holman, R.; V. 45, pp. 415-422

Species Data Sheet

Cypripedium montanum Douglas ex Lindl., Gen. Sp. Orchid. Pl.: 528 (1840)

[sip-ree-PEE-dee-um mon-TAY-num]



Cypripedium montanum

Cypripedium montanum is a medium sized, cold growing terrestrial that is found in the western North America from the Alaska panhandle to northern California and as far east as Yellowstone National park. It is found in the dappled shade of open coniferous forests at elevations around 180 to 2100 meters (600 to 7000 ft) growing in both moist and dry conditions in almost full sun. The plant has ovate-lanceolate, plicate, alternate leaves with a height of 25-75 cm (12-30 in.). The plant blooms in the spring and early summer (peak in May) on a slender, terminal inflorescence that carries 2 to 3 (rarely 4) that are 4.75 x 6 in. (12 x 15 cm) distant flowers subtended by a leafy bract. The flowers consist of a small, white lip usually with lines of purple spotting on the inside bottom of the pouch and sometimes purple blotching around the rim of the pouch. The long, slender twisted sepals and petals with a range of color from a dark red-brown or chocolate brown color to a pale green. The staminode is yellow usually with some purple or red spots. The flowers have a delightfully sweet-scent.

Common Name The Mountain Ladies Slipper

Synonyms:

None

Varieties / forms:

Cypripedium montanum f. welchii – has a crimson-edged pouch and very dark flowers

Cypripedium montanum f. praetertinctum – without any purple or red coloring on the petals, the staminode, or the pouch.

Awards:

	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS					1					
Year(s) Awarded					1970					

I am surprised with the lack of awards, no reason found.

Breeding Characteristics:

Breeding has been limited, with no major progeny or awards. There is a natural hybrid with Cypripedium parviflorum, Cypripedium x columbianum (no awards or progeny) although Cypripedium Sebastian (Cyp. parviflorum x Cyp. montanum) does have four F1 progeny.

	Registration decade													
Laelia speciosa	**<1890**	**1890**	**1900**	**1910**	**1920**	**1930**	**1940**	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**
Crosses Registered												1	4	7
Awards to Crosses Regtr														

From the above table, there has been a recent interest in breeding with Cypripedium montanum.

Major Hybrids:

None

References:

www.orchidspecies.com

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

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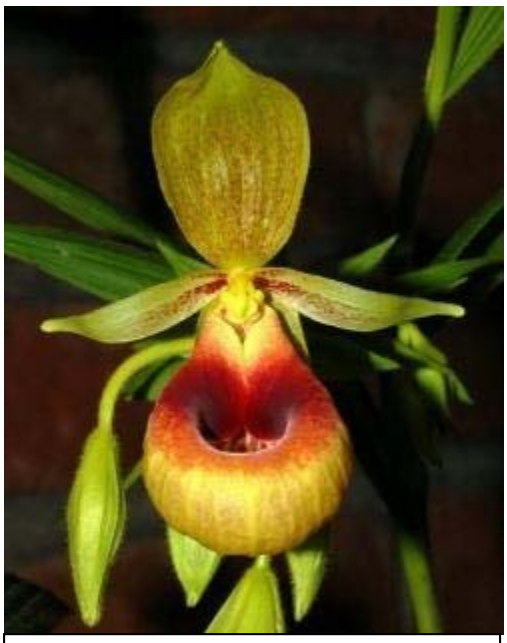
Orchids, Jun 2010, *Cover Story: Natural Hybridization Between Cypripedium montanum and its Yellow-Lipped Relatives*, Sheviak, C. J.; Vol 61, pp. 546-549

Orchids, Jan 2002, *Growing Two Lady's-Slipper Orchids*, May, R.; May, K.; Vol. 71, pp. 22-26

The Genus Selenipedium, Rchb.f., Xenia Orchid. 1: 3 (1854)
Type: Selenipedium [Sel.] chica [se-lee-ni-PEE-dee-um che-KA?]

This genus consists of nine sympodial terrestrials (rarely epiphyte) found in low to mid elevations, hill to montane forest and grassy slopes from Panama to Peru – Guianas. These tall growing, some as much as 15 ft (5 m), erect bamboo like plants have often branching, rather woody, clustered or well-spaced, hairy, reed-like stems, subtended by sheathing bracts below, each with numerous, broad to narrow, veined, pleated, sparsely hairy plicate leaves. The terminal, erect or branching, few- to many (50) successively flowering inflorescence has small, yellow to red flowers covered with spots. The dorsal sepal is erect to hooded over the lip; the lateral sepals are joined for two-thirds of their length, and the narrow petals have wavy margins. The pale yellow, trilobed lip has obscure but entire side lobes. The slipper-shaped midlobe is incurved on the front margin and is hairy within. The column has two fertile anthers one on each side and a shield-shaped staminode sitting in the center and protrudes over the top of the column. These orchids are rarely seen in cultivation.



Selenipedium chica
'Memoria Mario Paz' AM/AOS
Nov 2009, NS 5.5 x 7.0 cm

Selenipedium has some 'vanilla' traits to the extent that the seed pods have been used for seasoning like vanilla seed pods. The natives in Panama referred to Selenipedium chica as 'Vanilla chica' (which is translates as 'Little vanilla').

Generally, you would point scale using the Paphiopedilum point scale.

Table of species (OrchidWiz – Dec 2018 update)

No species have been used in breeding, and only three (Sel. Chica [1 AM/AOS], Sel. aequinoctial [1 CBR/AOS], and Sel. palmifolium [1 CHM/AOS]) have received any awards. Since these will all have a species report on them, nothing more will be stated in this report.

Progeny

None.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
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Species Data Sheet

Selenipedium palmifolium

(Lindl.) Rchb.f. & Warsz., Bonplandia (Hannover) 2: 116 (1854).

[se-lee-ni-PEE-dee-um palm-ee-FO-lee-um?]

Found in Trinidad to Northern South America and Brazil evergreen forests often near marshy areas at elevations of 200 to 400 meters (650 to 1300 ft) as a large, hot to warm growing 0.5-2.2 m (1.6-7.2 ft) tall terrestrial found in poor acidic soil and medium shade. The acute leaves are terete, rather sparingly branching, densely and coarsely glandular-hairy stems carrying narrowly oblong to narrowly elliptic, glabrous above, sparsely pubescent below, 11 to 22 cm (4 to 9 in.) long by 2-6 cm (0.8 x 2.4 in.) wide. It blooms in the fall on a terminal, erect, to 8" [to 20 cm] long, few to several successively flowered up to 20 cm (8.0 in.) long inflorescence with broadly lanceolate, glandular-hairy floral bracts with never more than one flower at a time, consequently blooming over several months. The flowers are up to 4 cm (1.5 in) long. The dorsal sepal is narrowly elliptic-ovate, obtuse, 1.8-2.6 x 0.8-1.5 cm (0.7-1.0 x 0.3-0.9 in.). Synsepal elliptic-ovate, bidentate at apex. This species has a shallow lip, 2.3-3.5 x 1.5-1.8 cm (0.90-1.4 x 0.6-0.7 in.), broadest around the rim and an almost triangular staminode as long as broad. The flowers are variable in color, the Trinidad form has a yellow lip whereas those from the Venezuelan shield have brownish lips. Purple markings are on the sides of the lip orifice but often extend around the front of the rim.

Selenipedium palmifolium

Synonyms:

No significant recent synonyms.

Varieties / forms:

None

Awards:

	FCC	AM	HCC	AQ	JC	CCM	CCE	CHM	CBM	TOTAL
AOS								1		
Year(s) Awarded								1999		

Breeding Characteristics:

None.

Hybrids:

None.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
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OrchidWiz.Database x5.1, update: Dec 2018

The Genus Mexipedium

(Soto Arenas, Salazar & Hágsater) V.A.Albert & M.W.Chase, Lindleyana 7: 174 (1992)

Type: Mexipedium [Mxdm.] xerophyticum [mex-ih-PEE-dee-um zero-FIT-ih-cum]

This is a monotypic genus endemic to a small region in Oaxaca State, Mexico. This genus was removed from Phragmipedium since it has morphological features intermediate between those of the tropical American Phragmipedium and the tropical Asiatic Paphiopedilum. Some of the morphological features are an elongated creeping stout rhizome with well-spaced growths(3 to 8 cm [1-3 in.]), fleshy, coriaceous, conduplicate leaves, very small flowers, unilocular ovary, branched inflorescence, valvate sepal aesitvation and inflated lip. This separation has been supportted DNA analysis.

It does not easily breed with Phragmipedium.

The only member is this genus is a relatively small plant with conduplicate leaves 3.5-12 x 1.2-1.8 cm (1.4-4.7 x 0.5-1.9 in.). The dorsal sepal and synsepal are roughly the same size with the synsepal being generally larger and bidentate at apex.

Generally, you would point scale using the Paphiopedilum point scale.

Mexipedium xerophyticum
'Big Boy' HCC/AOS
Jul 2002, NS 2.7 x 2.4 cm

Table of species (OrchidWiz – Dec 2018 update)

No breeding has been done with the single species in this genus, but it has received 8 AOS awards (2 HCCs, 2 CCEs, 2 CCMs, 1 CBR). Since this will have a species report, nothing more will be stated in this report.

Progeny

None.

References:

www.orchidspecies.com
http://apps.kew.org/wcsp/qsearch.do
https://secure.aos.org/aqplus/SearchAwards.aspx
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Cribb, P.; Purver, C.; *Slipper Orchids of the Tropical Americas,* 2017