# Hengduan Mountains Biotechnology Ltd.

Chengdu, Sichuan, P.R. China -

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# 四川横断山生物技术(有)

# Orchid-List USA, Autumn 2015

Pre-Ordering only. After legal import into the US plants will be shipped individually to the customers.

## Welcome at Hengduan Mts. Biotechnology!



Hengduan Mts. Biotechnology is a German-Chinese company dedicated to the conservation and cultivation of native Chinese orchids. Our base is in Sichuan, Southwest China, in one of the biodiversity hotspots of the world, the Hengduan Mountains System (synonym Mountains of Southwest China), home to about 400 orchid species and the Giant Panda. Our laboratory and subtropical nursery in Chengdu, Sichuan's capital, as well as the alpine nursery beds in North Sichuan are the tools for in vitro propagation and subsequent raising of a wide range of Chinese orchids, with our specialty being slipper orchids (*Cypripedium & Paphiopedilum*, but also *Phragmipedium* and *Mexipedium*). We create also orchid hybrids and our modern laboratory is further engaged in the production of fruit crop plants and medicinal herbs.

Hengduan Mts. Biotechnology is registered with the State Forestry Agency (SFA, the CITES authority of the Peoples Republic of China), as in-vitro propagation facility of CITES appendix I & II orchids and grower of these artificially produced plants. We legally export flasks as well as seedlings of all stages from recently deflasked to flowering size of *Paphiopedilum*, *Cypripedium* and many other types of orchids to North America, the European Union, Japan and other countries. Because the paperwork for every single export involves 7 different governmental agencies with 12 steps, and requires at least 3 months (usually more), we only export once or twice a year to a given region. All costs for CITES, phyto, and import are included in the list prices! For further information regarding plant availability and ordering please contact us through sales@hengduanbiotech.com.

Every year we organize and lead eco-tours through China. The tours are conducted in cooperation with the Jiuzhaigou International Travel Agency and insured according to Chinese law. Main focus is orchids and general flora, but the fascinating culture of China is inevitably part of each tour as well! In June 2015 we have conducted two tours into the mountains of Yunnan & Sichuan. On both tours Cypripedium and many alpine flowers, as well as awesome scenery and ethnic cultures were in focus. Net year in May we will lead a pre-conference tour for the 6<sup>th</sup> Int. Orchid Conservation Conference in Hong Kong. Focus of the tour will be paphiopedilums in the wild. In June we will lead a tour for the Orchid Conservation Alliance in North Sichuan (focus cypripediums). Please send inquiries to

info@hengduanbiotech.com or sales@hengduanbiotech.com.

Wenqing & Holger Perner



#### Aerides rosea

A great foxtail orchid with very attractive inflorescences. The breeding stock is of Chinese origin and the plants grow dry and cool 5-15 °C (41-59 °F) in winter and humid and warm 18-30 °C (64-86 °F) in summer Plant in an open mix. It can be grown in pots but does best in a basket in bright conditions. Flowers in spring.

Flower diameter ca. 2.5 cm

FS, US \$ 20.-



#### Ascocentrum ampullaceum

A compact epiphyte from South and Southeast Yunnan. Cultivation as for Aerides rosea. This species is a longtime favorite with orchid fanciers worldwide and fairly easy to grow if water quality and cultural conditions are sufficient. It rewards with dense bouquets of orange to vermillion flowers in spring.

Diameter of single flower ca. 1.5 cm

FS, US \$ 25.-



### Bulbophyllum violaceolabellum

Epiphyte and lithophyte from southern Yunnan, grows best mounted or in a basket. In winter keep cool and bright with reduced watering. In summer the plant likes intermediate to warm conditions with copious watering, excellent drainage required. Plant creeping, 10-18 cm tall. Flowering in spring.

Flower diameter ca. 1.5 cm

FS, US \$ 25.-



## Bulbophyllum wendlandianum

Attractive epiphyte from western Yunnan, somewhat similar to B. rothschildianum. Grows best mounted or in a basket. In winter keep cool and bright with reduced watering. In summer the plant likes intermediate to warm conditions with copious watering, excellent drainage required. Plant creeping, 8-10 cm tall. Flowering in spring.

Flower length approx. 9-15 cm.

FS, US \$ 25.-



# Calanthe argenteostriata

Terrestrial, subtropical plant from South China, not hardy in temperate regions with cold winters! In winter cool and dryer in summer intermediate to warm with copious watering, mind good drainage! The evergreen leaves are attractively striated and the white flowers turn yellow with aging. Leaves 20-30 cm tall, flower stem up to 70 cm. Flowers in spring.

Flower diameter ca. 3 cm.

FS, US \$ 30.-



#### Calanthe Bicolor ('Nichrin' x 'Hinotori')

Horticultural crosses of *Calanthe* x *bicolor* (*discolor* x *striata*) are very popular in Japan. The plants we offer are from a cross Prof. M. Tahara made between two famous parents, Nichrin and Hinotori. The capsule was sown in our laboratory and a batch of seedlings raised that show a wide variety of attractive colors and shapes. Suitable for a wide range of climates (CA to NY) in gardens or potted.

Flower diameter 3-4 cm.

FS, US \$ 30.-



### Calanthe puberula

(Synonym Cal. reflexa)

A terrestrial wintergreen species (leaves are renewed in spring) of warm-temperate to near subtropical evergreen broadleaf forests in SW, S and E China. Not fully hardy! In regions with cold winters best grown potted in a cool greenhouse. Flowers in summer.

Flower height 2.5-3 cm.

FS, US \$ 28.-



# Cleisostoma fuerstenbergianum

(syn. Cleisostoma flagellare)

Epiphyte from southern China and adjacent countries, should be grown mounted. In winter keep cool and bright with reduced watering. In summer the plant likes intermediate to warm conditions with copious watering, excellent drainage required. Plant with terete pendulous leaves up to 60 cm long. Flowers in late spring to early summer.

Flower diameter ca. 0.8-1 cm.



## Coelogyne fimbriata

Popular in cultivation this species is widespread in South China and adjacent countries. It grows as a lithophyte or epiphytic on tree trunks and easily forms dense mats. Typical cultivation regime for Chinese orchids with slightly dry cool to intermediate winters and moist warm summers. Best grown mounted or in baskets.

Flower diameter ca. 3.5-4 cm.

FS, US \$ 20.-



#### Coelogyne prolifera

The type species of section *Proliferae*. This is one of 4 species in this section occurring in China. The compact plants, 8 inches (20 cm) tall, are flowering from this years and last year's inflorescences. Like most Chinese orchids to be kept cool and slightly dry in winter, and warm with copious watering in summer. Flowers in spring.

Flower diameter ca. 3.5-4 cm.

FS, US \$ 20.-



### Coelogyne taronensis

(syn. Coel. weixiense)

Already scientifically published in 1922, this very attractive species came into cultivation only around 2008. It is only known as an epiphyte in oak forests of the Gaoligong range in West Yunnan. Use demineralized water for irrigation. Keep cold to cool in winter and intermediate to slightly warm in summer. Flowers in spring.

Flower diameter ca. 5-6 cm.

FS, US \$ 35.-



## Coelogyne tsii

Another rare Coelogyne from the Gaoligong range in West Yunnan this species was published as late as 2006. It is closely related to Coel. prolifera, but is easily recognized by its bright red flowers with a large blackish mark on the tip of the lip. This epiphyte from subtropical mountain forests need cool winters and intermediate to warm summers. Flowers in spring.

Flower diameter ca. 2-2.5 cm.



# Cymbidiums

We have an assortment of selected strains of Oriental cymbidiums of Mainland Chinese origin. Many of these types are rarely available from other sources.

Please see the attached list at the end of this general list. You also find all other Cymbidium species there.



#### Cypripedium bardolphianum

A very rarely offered dwarf cypripedium from Southwest China. A creeping and branching rhizome runs close to the substrate surface and produces one-leafed shoots, the bract forming the second leave. The flower, unique in slipper orchids, has a pair of functional pollinia in each anther, and a hollow stigma. Cultivation as for Cyp. tibeticum, but more demanding due to its small size (6-10 cm tall).

Flower diameter ca. 1.5 cm.

(very limited supply) FS, US \$ 60.-



# Cypripedium flavum

A sister species to *Cyp. reginae* from Northeast North America, this Southwest Chinese endemic needs cool summers and uninterrupted cold winters (protection from warm spells and moisture). In summer it needs copious watering but excellent drainage. The soil pH needs to be between 7 and 8 (add plenty of lime or oyster shells to the substrate). Flowers in early summer.

Flower diameter ca. 6-10 cm.

FS, US \$ 30.-



# Cypripedium plectrochilum

A close relative to the North American rams head lady slipper, Cyp. arietinum. Similar in size, though often slightly smaller. Cultivation as for Cyp. tibeticum, greater warmth tolerance than with the other species offered here, but due to its small size more vulnerable to adverse conditions. 10-15 cm tall.

Flower diameter ca. 1.5-2 cm.

(limited supply) FS, US \$ 40.-



# Cypripedium tibeticum

Full round flowers of intensive burgundy on a white background characterize our line of breeding in Cyp. tibeticum of the Min Shan form. Like with most cypripediums from Southwest China, cold uninterrupted winters and cool summers have to be provided. For all cypripediums offered here we suggest a mix of 4-5 parts 4-6 mm perlite, 1 part sedge peat or bark humus and 1/2 part lime or oyster grit. The pH should be between 6.5 and 7. Flowers in late spring to early summer.

Flower diameter ca. 7-12 cm.

Unselected, FS, US \$ 40.-



# Cypripedium tibeticum select extra

Seedlings selected during their first flower for superior flower shape, superior size and excellent coloration.

The plants available here are absolute top class and not available anywhere else. The photo, taken June10th 2015, shows some of the actual seedlings on offer. They are first-flowerers and will increase in size and quality!

Flower diameter ≥ 10cm.

(very limited supply) FS, US \$ 80.-



### Cypripedium tibeticum select

Seedlings selected during their first flower for good flower shape, superior size and good coloration.

The photo on the left shows examples of a selected extra (see next offer), a selected an a regular flower. Please note that the offer above (unselected seedlings) contains good quality seedlings of the regular type as well as plants that are flowering size but haven't flowered during the last season.

Flower diameter ca. 10-12 cm.

(limited supply) FS, US \$ 60.-



#### Dendrobium catenatum

(Syn. D. officinale)

This is the most important medicinal dendrobium in China. Its dried stems are used especially for infections of the respiratory passages. It is an epiphyte and mainly lithophyte from Central to East China. The Japanese forms are known under the synonyms *D. tosaense* and *D. stricklandianum*. Cultivation as for the other Chinese dendrobiums. Flowers in spring.

Flower diameter ca. 3 cm.



### Dendrobium chrysanthum

This is an attractive deep golden yellow dendrobium from South China and adjacent regions. It has long leafy pendulous stems and should be grown mounted, in hanging pots or baskets. Keep cool and somewhat dryer in winter and warm and humid in summer. A useful addition to any dendrobium collection because the flowers appear in autumn.

Flower diameter around 4 cm.

FS, US \$ 30.-



#### Dendrobium chrysotoxum

This dendrobium can grow into an impressive specimen plant with large numbers of flowers. Can be grown in pots or baskets, smaller specimens also mounted. Temperature and watering regime as for most other Chinese subtropical orchids offered here. This and the other dendrobiums in this list unless otherwise noted should be grown in the brightest area in the greenhouse. Flowers in spring.

Flower diameter around 4 cm.

We offer plants from several shoots up to specimen size.

FS, starts at US \$ 30.-



### Dendrobium crepidatum

The favorite Chinese orchid of Holger Perner, who loves the waxy candy-pink flowers and appreciates the anti-inflammatory and soothing properties of the stems that can be chewed raw in case of a sore throat, at least if you don't mind the bitter taste. Apart from being a home remedy this is a lovely orchid that can be grown mounted, in baskets or in well-drained pots. Flowers in spring.

Flower diameter around 4 cm.

FS, US \$ 20.-



## Dendrobium fanjingshanense

Related to *D. moniliforme*, this rare species from a narrow region in East-Central to East China (Guizhou to Zhejiang province) is clearly distinct by its orange yellow (Guizhou) to intensive brick red (Zhejiang) flowers. It grows mainly as an epiphyte but occurs also on cliff faces. The species needs cold and slightly dry winters and intermediate to slightly warm humid summers. Flowers in spring.

Flower diameter 3-3.5 cm.

FS. US \$ 60.-



### Dendrobium fimbriatum var. oculatum

This is a large species with stems reaching 60-120 cm in length. Like the other Chinese dendrobiums to be cultivated cool and on the dry side in winter and warm and humid in summer. With some staking the plant is well accommodated in a standing pot, otherwise best grown hanging in pots or baskets. Flowers in spring.

Flower diameter 3-4 cm. We offer plants from several shoots up to specimen size.

FS, from US \$ 25.-



#### Dendrobium hancockii

This species from Central to South China is rather variable and might, as H.P. Wood suggest in Flora of China, Vol. 25, consist of actually two taxa. However, the two forms might also just be variations of a single species, because flower and leaf characters are variable indeed. We offer large specimen plants. Flowers in spring.

Flower diameter 3-4 cm.

Larger plants with several shoots, from US \$ 35.-



### Dendrobium hercoglossum

An epiphytic and lithophytic dendrobium from South China. The stems are pendulous and require cultivating the plant in hanging pots, baskets or mounted. Cultivation regime as for the other species offered here, but in slightly more shade in summer. Flowers in spring.

Flower diameter around 3 cm.

Larger plants with several shoots, from US \$ 25.-



#### Dendrobium hookerianum

A large and attractive species from the Himalayas and adjacent mountain ranges, which occurs in China in Southeast Tibet and West Yunnan. It somewhat reminds at D. fimbriatum, but the flowers are larger, with narrower segments, and they are more evenly distributed in several inflorescences over the stem. Cultivation as for other Chinese dendrobiums. Flowers in late summer.

Flower diameter 5-7cm.



#### Dendrobium jenkinsii

A pretty miniature species with flowers nearly as large as the entire plant. It is related to *D. lindleyi* (syn. *D. aggregatum*) but a well defined species on its own. Cultivation as for most other Chinese dendrobiums offered here. Best grown mounted. Irrigation water low in minerals insures long-term success. Flowers in spring.

Flower diameter 2-3 cm.

FS, US \$ 15.-



# **Dendrobium kingianum** Dark Strain

We crossed a vigorous dark clone of Japanese origin, 'Hengduan Purple', with the very dark Australian clone '321'. The latter tends to produce keikis on keikis and grows itself to death. The resulting batch of seedlings, however, consists entirely of well growing plants. All that have flowered so far are dark to very dark, some of most exceptional quality! Flowers in spring. We offer unselected seedlings that have not flowered before.

FS, US \$ 25.-



# **Dendrobium pendulum** (syn. *D. crassinode*)

This species from South Yunnan combines an interestingly shaped stem with very attractive and fragrant flowers. Cultivation as for most other Chinese dendrobiums. Best grown mounted or in baskets. Flowers in spring.

Flower spread 4-6 cm.

FS, US \$ 25.-



# **Dendrobium scoriarum** (syn. *D. guangxiense*)

A lithophyte from western South China (Yunnan to Guangxi). The off-white flowers carry a very dark-red spot on the lip (scoriarum means scorched). Cultivation as for other Chinese dendrobiums. Best grown mounted or in well drained hanging containers. Still unusual in cultivation. Flowers in spring.

Flower spread 2.5-3 cm.



## Dendrobium thyrsiflorum

A very impressive orchid when in flower because the inflorescences have the size and shape of pineapples and consist of white flowers with a contrasting orange lip. Regarding vigor and cultivation similar to D. chrysotoxum. We offer plants with a few shoots to large ones with over a dozen shoots. Flowers in spring.

Diameter of single flower around 4 cm.

FS, US from \$ 25.-



# Dendrobium wangliangii

This is a spectacular miniature dendrobium from North Yunnan, where the plants grown on the rough bark of oak stems. The showy flower attains about 2/3 or more of the size of a young leafed stem! This species should only be grown mounted and kept cold and rather dry in winter (don't let the pseudobulbs shrivel) and intermediate and humid in summer (use RO-water!). Flowers in spring

Flower spread 3-4 cm.

FS, US \$ 45.-



#### Dendrobium wardianum

A species with very attractive flowers, which appear on the last years pendulous stems. Resembling D. pendulum but with less swollen nodes and two dark spots at the lip base. Cultivation as for most other Chinese dendrobiums. Best grown mounted or in baskets. Flowers in spring.

Flower spread 4-6 cm.

FS, US \$ 25.-



## Dendrobium wilsonii

This species is currently unrightfully regarded a synonym of *D. moniliforme*. In a taxonomic revision of 2008 the leading Chinese orchid scientists X.H. Jin, S.C. Chen and Y.B. Luo have demonstrated the species status of this dendrobium. The very large flower has a nice peppermint-lemon fragrance. Cultivation as for the other Chinese dendrobiums. Flowers in spring.

Flower height on average 8-9 cm.



#### Eria coronaria

The twin-leafed compact species (15-25 cm tall) carries one of the largest flowers in the genus (around 4 cm NS) and is perhaps the most attractive of all erias. The plants origin is southern China, where they occur mostly as lithophytes forming large colonies. The plant can be grown potted or in a basket. The flowers appear around November.

Flower diameter 3-4 cm.

FS, US \$ 20.-



#### Holcoglossum amesianum

Terete pendulous leaves of 25-35 cm length and stout roots let this colorful Holcoglossum best grown mounted. Our stock is of Southwest Yunnan origin and needs cool winters and warmintermediate to warm summers. The flowers appear in spring.

Flower diameter ca. 3 cm.

FS, US \$ 20.-



## Holcoglossum flavescens

Its is the smallest species of the genus with proportionally very large flowers. Best grown mounted under bright conditions but without direct sun. Our stock originates from southeastern Sichuan and needs cool, bright and modestly dry conditions in winter and intermediate conditions with copious watering (use ROwater!) in summer. It flowers in early spring.

Flower diameter ca. 1.5-2 cm.

FS US \$ 15.-; FS XL, US \$ 25.-



## Holcoglossum kimballianum

This is the perhaps most beautiful holcoglossum species. It originates in SE Yunnan, SW Guangxi and directly adjacent parts of NE Vietnam. Our breeding stock is from SE Yunnan. It is a compact to modestly large plant that grows well if mounted. With its central stem, from which slender terete leaves spread, it can also be grown in a basket or pot. It flowers in autumn. We offer large and vigorous plants.

Flower diameter ca. 4 cm.

FS XL, US \$ 35.-



## Holcoglossum rupestre

Closely related to *H. flavescens* and *H. sinicum*. From the former it differs by its larger flowers with longer and narrower spur as well as the longer and straight upright leaves. The similar *H. sinicum* has a curved and wider spur, usually pendulous leaves, and no central callus ridge. Cultivation as for *H. flavescens*. *H. tsii* is a very different species and not a synonym of *H. rupestre*! Flowers in spring.

Flower diameter ca. 2-2.5 cm.

FS, US \$ 25.-



#### Holcoglossum sinicum

This species from Northwest Yunnan differs from H. rupestre and H. flavescens by its narrower sepals and petals and the relatively large curved spur. The long leaves are usually pendulous. Cultivation as for H. flavescens. Flowers in spring.

Flower diameter ca. 2-2.5 cm.

FS, US \$ 25.-



### Holcoglossum tsii

Published by T. Yukawa in 2000. In the formal description Yukawa mentions that E. Christenson had mistakenly identified this new species as *Holcoglossum rupestre* in Orchid Digest 1998, issue 4. Actually *H. rupestre* is a very different species, but unfortunately Yukawa's new species is falsely recognized as a synonym of *H. rupestre* in the World Orchid Checklist, Kew. This rare and very attractive compact species occurs in South Sichuan and adjacent North-Central Yunnan. Cultivation as for H. flavescens.

Flower height ca. 4-4.5 cm.

FS, US \$ 60.-



## Holcoglossum wangii

A species from SE Yunnan, SW Guangxi and directly adjacent parts of NE Vietnam. Our breeding stock is from SE Yunnan. It is relatively easy to grow mounted under cool conditions in winter and warm ones in summer. Initially a compact plant it will grow into a floriferous specimen plant over the years! It flowers in autumn, the flowers increase in size on older well grown specimens.

Flower diameter ca. 4 cm.



## Hygrochilus parishii

Originally known as *Vanda parishii* this attractive epiphyte from Southwest Yunnan has been put into *Vandopsis* as well, but today is firmly based in its own genus. The leaves look like phalaenopsis, the flower like a vanda. Cultivation cool to intermediate in winter, warm in summer. Best grown in a basket or mounted. The showy flowers appear in summer.

Flower diameter ca. 4-5 cm.

Large plant US \$ 40.-, specimen US \$ 60.-



#### Neofinetia richardsiana

The Central Chinese *N. richardsiana* differs from *N. falcata* by its shorter spur and shorter sepals and petals. The spur length, however, is very variable in N. richardsiana and in a given population also plants with longer spurs, later published as *N. xichangensis*, occur. Very rare in cultivation, it is more difficult to grow and requires a cold winter (high fluctuation between night and day, i.e. 0-10 °C respectively 32-50 °F) with reduced watering at high humidity, and warm humid summers with copious watering (RO-water!). Best grown mounted. Flowers in spring.

Flower diameter without spur ca. 1.5 cm. FS, US \$ 25.-



### Paphiopedilum armeniacum

The spectacular yellow slipper orchid from West Yunnan with some contrasting red on the staminode. This is perhaps the most cold tolerant of all paphiopedilum species and often faces slight and brief frosts during the dry winter season in its native habitat. In summer it likes it intermediate to warm with plenty of watering. Increases vegetative through stolons (runners). Flowers in spring.

Flower spread 6-10 cm.

FS, US \$ 30.-



# Paphiopedilum barbatum dark strain

We offer here 2<sup>nd</sup> generation seedlings of a selected dark strain of Paph. barbatum which show good stance and excellent dark coloration. This tropical Southeast Asian species needs intermediate conditions with slightly reduced watering (but never let the plants dry out) in winter and a warm regime with copious watering in summer. Regular repotting and good water quality (RO-Water or rain) insure long-term success. Flowers in summer.

Flower spread 8-11 cm.



# Paphiopedilum barbigerum var. coccineum

Lithophytic orchid from warm-temperate to subtropical regions in Southeast Yunnan and adjacent North Vietnam. In winter keep cool with slightly reduced watering. In summer the plant likes intermediate to warm conditions with copious watering, excellent drainage required. Rather variable small to just medium-sized plant with a leaf spread of 10-25 cm. Flowers in summer.

Flower diameter 5-8 cm.

FS, US \$ 25.-



# Paphiopedilum callosum var. callosum

A classic mottle-leafed species that shouldn't be missed out in any slipper orchid collection. Cultivation as for *Paph. barbatum*. In collections and in the trade typical var. *callosum* (larger flowers showing more or less sigmoid petals, like our stock of seedlings on offer and shown to the left) is labeled as var. *sublaeve*, but see below. Flowers in summer.

Flower diameter 10-12 cm.

FS, US \$ 20.-



# Paphiopedilum callosum var. warnerianum

Long known as *Paph. callosum* var. *sublaeve*, the name *Paph. callosum* var. *warnerianum* has priority. Our offer is of a very compact type of var. *warnerianum* with multi-spotted petals. Cultivation as for *Paph. callosum* var. *callosum*. Flowers in early summer.

Flower diameter 6-8 cm.

FS, US \$ 40.-



# Paphiopedilum charlesworthii

A very pretty slipper orchid, likely with the most attractive dorsal sepal in the genus. The plants on offer here are from stock derived in West Yunnan. They are very compact with relatively small flowers. But these are of good shape and color and provide excellent material for breeding miniature hybrids. Cultivation as for Paph. areeanum. Flowers in autumn.

Flower spread 5-7 cm.

FS, US \$ 25.-



# Paphiopedilum Conco-callosum

This primary hybrid was registered by R. H. Measures, England, in 1895. We used our compact *Paph. callosum* var. *warnerianum* with broad multi-spotted petals for the remake. The offspring came out with a full shape and dark peach color. Of the seedlings flowered so far most had a good shape, several a very good shape. Nice compact plants. Flowers in spring.

Flower spread 6-7 cm.

FS, US \$ 30.-



# Paphiopedilum concolor

Our breeding stock is of Chinese origin and easier to cultivate than plants from other regions. In winter they should be kept cool with reduced watering. In summer warm conditions with regular watering are required. Excellent drainage and strict avoidance of stale wet conditions are essential for successful cultivation. Needs more light (Cattleya level). Flowers in late spring.

Flower spread 6-7 cm.

FS, US \$ 30.-



### Paphiopedilum dianthum

Unlike tropical strap-leafed multi-flowered paphiopedilums like *Paph. lowii* or *Paph. philippinense*, Paph. dianthum needs cool dry winters at 10-15 °C (50-59 °F) with night temperatures down to 4-8 °C (39-46 °F) for best development and good flowering. Summers should be warm and humid with copious watering in well draining substrate. Flowers late summer to early autumn.

Flower spread 14-20 cm.

FS, US \$ 40.-



# Paphiopedilum dianthum peloric

The peloric form of *Paph. dianthum* develops no pouch but three staminods and occasionally a third petal. It is a curiosity like *Phragmipedium lindenii*, but unlike this South American species, the peloric form of *Paph. dianthum* is unable to self-pollinate, thus cannot form populations and remains a very rare mutation. We offer flowering sized divisions. A collector's item.

Flower spread 14-15 cm.

Very limited, FS, US \$ 120.-



# Paphiopedilum Dihenry

F Yuan Liu, pioneering breeder of native paphiopedilum in the 1980ies and 1990ies, and botanist in Kunming, Yunnan, made the cross between Paph. dianthum and Paph. henryanum in 2004. In 2013 the first seedling of this batch flowered at our greenhouse and we registered it. An interesting collector's item. Flowers in autumn.

Flower spread 9-12 cm.

FS, US \$ 28.-



# Paphiopedilum Doll's Kobold

For this cross we used the small Chinese form of *Paph. charlesworthii* and crossed it with a compact type of *Paph. henryanum*. Unlike most *Paph*. Doll's Kobold we have seen elsewhere our plants stay miniature to compact sized and show proportionally large flowers of attractive coloration. Cultivation as for the parents. Flowers in autumn.

Flower spread 6-7 cm.

FS, US \$ 25.-



# Paphiopedilum emersonii

An exceptional beautiful species with very large flowers for its compact size. Like most Chinese paphiopedilums it needs cool and dry winters and warm summers (see *Paph. dianthum* for details) and can even stand slight frosts if they are brief and the plant relatively dry. The species is somewhat difficult to keep strong and healthy over the years and needs experience to be grown continuously. Flowers in spring.

Flower spread 8-14 cm.

FS, US \$ 50.-



# Paphiopedilum Franz Glanz

The cross between Paph. armeniacum and Paph. emersonii combines the good shape of both parents with the intensive yellow coloration of Paph. armeniacum. The result is a most attractive and harmonious Parvisepalum hybrid, named after the leading slipper orchid breeder from continental Europe. Cultivation as for the parents. Flowers in spring.

Flower spread 8-10 cm.



# Paphiopedilum gratrixianum var. daoense

This represents the variety with wide leaves and short inflorescences from South China and North Vietnam. The main character of var. daoense is the white dorsal covered in dark spots and with only the basal quarter greenish on a short inflorescence. Leaves 15-30 cm long and 3-4 cm wide. Flowers in autumn.

Flower spread 6-8 cm.

FS, US \$ 25.-



# Paphiopedilum hangianum

Still a rare plant in cultivation. This is the large sister species of *Paph. emersonii* from North Vietnam and directly adjacent China. Cultivation as for *Paph. emersonii*, but with slightly warmer winter temperatures. Slow grower. We are currently still the only Asian nursery to legally export this species into the EU and US. Flowers in spring.

Flower spread 10-18 cm.

Very limited supply, NFS US\$ 100.-FS , US \$ 150.-



# Paphiopedilum Harold Koopowitz

With both parents carrying large flowers this stately cross has not only inherited the flower size but also positive floral characters of both parents. The elegant state of *Paph. rothschildianum* is combined with the jade color and chocolate toned reticulation patterns of *Paph. malipoense*. We used an awarded *Paph. rothschildianum* of Japanese origin ('Jarunee' BM & Blue Ribbon, APOC 10<sup>th</sup>) and combined it with one of our best *Paph. malipoense*. Usually flowers in summer and autumn.

Flower spread expected 14-18 cm.

NFS, US \$ 30.-



# Paphiopedilum helenae

This is a true miniature species that carries proportionally large flowers. It easily forms clumps with several flower shoots, neatly fitting in the palm of your hand if treated right. Keep it moist (excellent drainage!) and warm under open shade in summer and brighter, intermediate to cool and slightly dryer in winter. We were the first to legally import this species into the US. Flowers in autumn.

Flower spread 3-7 cm.



# Paphiopedilum Helmut Vogel

This new hybrid was registered by us in November 2014 and named after a friend of ours who loves plants and animals. In Paph. Helmut Vogel we combined the large-flowered Paph. villosum var. villosum with Paph. henryanum, which usually transmits its attractive pink pouch and dorsal spotting. The resulting hybrid fully lives up to our expectations. Flowers in autumn.

Flower spread 6-8 cm.

FS, US \$ 35.-



# Paphiopedilum Hengduan Grace Helen

In October 2013 we registered the cross between Paph. helenae and Paph. Grace Darling as Paph. Hengduan Grace Helen. This year we flowered a large number of seedlings out and are very pleased with the result: a miniature slipper orchid with a nice dorsal and an overall yellow coloration (in the first days greenish yellow).

Flower spread 6-8 cm.

FS, US \$ 20.-



# **Paphiopedilum** Hengduan Snake Charmer

A hybrid registered by us in April 2014. It is similar to Paph. Crossianum (insigne x venustum). We used Paph. insigne and Paph. wardii f. alboviride for this grex. The leaves of about half the seedlings are finely mottled in a snake skin fashion. Easy grower. Flowers appear from autumn to early spring.

Flower spread around 10 cm.

FS, US \$ 15.-



# Paphiopedilum Hengduan Sweetheart

We crossed *Paph. helenae* with a small form of *Paph. spicerianum* from China and got a lovely miniature paph that grows vigorously and flowers richly. We registered it as *Paph.* Hengduan Sweetheart in 2010. Cultivation as for *Paph. helenae*. Flowers in autumn.

Flower spread 6-7 cm.



# Paphiopedilum Hengduan's Purple Tiger

Registered by us in October 2014 this colorintensive hybrid combines Paph. callosum var. callosum with Paph. tigrinum. The resulting plant shows the expected spots and stripes but also a lot of purple coloration. An interesting addition to any slipper orchid collection.

Flower spread 7-9 cm.

FS, US \$ 35.-



# Paphiopedilum henryanum

This is a very interesting parent in hybridization because it usually transmits a colorful lip and bold spotting while keeping a relatively good shape. But already on its own the compact species is a lovely addition to any orchid collection! Our seedlings are from intensively colored, richly spotted and well-shaped parents. Cultivation as for Paph. areeanum. Flowers in late summer and early autumn.

Flower spread 6-10 cm.

FS, US \$ 25.-



# Paphiopedilum henryanum f. christae 'Hengduan Raspberry Lime' x self

This is the first time we offer seedlings of this extremely rare semi-album form of *Paph. henry-anum* (syn. *Paph. chaoi*) in the US. We have only produced a small number of this exquisite form. The photo shows the motherplant 'Hengduan Raspberry Lime' (center) from the type collection of *Paph. chaoi*, with two first-flowering seedlings from its selfing.

Flower spread 7-8 cm.

Very limited, FS, US \$ 300.-



# Paphiopedilum hirsutissimum var. esquirolei

The attractive large-flowered Chinese form of the eastern variety (Thailand, Cambodia, Laos, Vietnam, China) of *Paph. hirsutissimum*. Cultivation as for Paph. areeanum. Flowers in spring.

Flower spread 10-16 cm.

FS , US \$ 25.-

Multiple shoots, FS, US \$ 30.-



# Paphiopedilum Ho Chi Minh

This attractive *Parvisepalum* hybrid combines the fuller shape of *Paph. delenatii* with the more intensive color of *Paph. vietnamense*. We used our best clones of these two species and got a nice batch of good to very good *Paph.* Ho Chi Minh. Cultivation as for *Paph. areeanum*. Flowers in spring.

Flower spread 7-10 cm.

FS, US \$ 25.-



# Paphiopedilum Hung Sheng Pink

An interesting hybrid with soft pastel tones in a rather large flower. The depicted flower is from a different batch not made in our nursery and was awarded a bronze medal at the Japan Grand Prix Orchid Show (Tokyo Dome) 2011. We expect flowers of similar quality on our plants, for which we used high-quality parents, seed plant was Paph. moquetteanum, pollen plant Paph. emersonii.

Flower spread ca 10-12 cm.

FS, US \$ 30.-



# Paphiopedilum insigne 'Yunnan' x self

We selfed our large flowered clone 'Yunnan' of Paph. insigne, originating from Southwest Yunnan. This new Yunnan strain with its elegant wide flower will bring back a little more of the wide range of forms that a hundred years ago characterized this classic Paphiopedilum species. Cultivation as for Paph. areeanum. Flowers in winter.

Flower spread 9-10 cm.

FS, US \$ 35.-



# Paphiopedilum Madeline

This cross between *Paph. argus* and *Paph. bellatulum* was published by G.E. Palmer in 1895. We remade it with Paph. bellatulum as seed plant. Strong spotting of the wide petals is the main characteristic of the hybrid. A collector's item. Flowers in late spring and early summer.

Flower spread 7-8 cm.



## | Paphiopedilum Magic Lantern

Originally made by Terry Root and registered in 1990. The well balanced shape and suppression of yellow pigments of *Paph. delenatii* combined with the strong pink tones in all flower segments of *Paph. micranthum* account for one of the best pink paphiopedilum hybrids. We have remade the cross (see photo) and offer seedlings of two batches here. Flowers in summer.

Flower spread 5-6 cm.

FS, US \$ 35.-



# Paphiopedilum malipoense

This is the jade slipper orchid from China with flowers of an intensive raspberry-candy fragrance. The flower buds need several months from winter to spring for their development and it is crucial to keep the plants cool to cold and modestly dry during this time to prevent bud drop. In summer the plant grows well in warm humid conditions with copious watering. Flowers in spring.

Flower spread 6-12 cm.

FS, US \$ 35.-



# Paphiopedilum Max Sandbichler

Paph. hirsutissimum and Paph. Pinocchio were crossed by G. Demmel and registered as Paph. Max Sandbichler in 2004. We remade the cross with the album form of Paph. hirsutissimum var. esquirolei and the yellow form of Pinocchio, but the resulting seedlings show red pigmentation. Nevertheless it is a fine cross with 2-3 sequentially opening flowers. Can flower any time.

Flower spread 10-12 cm.

FS, US \$ 30.-



# Paphiopedilum micranthum

'micranthum' means 'small flowered' and is based on a forcefully opened young flower bud from a plant collected in the wild in January 1940. The actual flower, however, is large! Vegetatively similar to *Paph. armeniacum*, this species is somewhat easier to grow. It can accept warmer winter conditions, although if kept too warm it will grow many extra shoots but hardly ever flowers. Flowers in spring.

Flower height 6-10 cm.

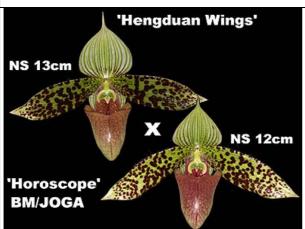


## Paphiopedilum Montagnard

Similar to the proposed natural hybrid *Paph.* x *dixlerianum* this is a cross made between *Paph. callosum* and *Paph. sukhakulii.* Intensive coloration and bold markings are the main characteristics of this attractive grex. With maturing specimens the flower size and overall quality improves even more. Flowers in spring and early summer.

Flower spread 8-11 cm.

FS, US \$ 30.-



#### Paphiopedilum sukhakulii

'Hengduan Wings' x 'Horoscope' BM/JOGA

We used two of our better clones of Paph. sukhakulii for this seed batch. We expect flowers of above average size with good coloration and good posture. The seedlings have approached near flowering size and should bloom in about a year. Cultivation as for Paph. callosum. Flowers in spring.

Flower spread ca. 12-13 cm.

FS, US \$ 30.-



### Paphiopedilum tranlienianum

Like Paph. hangianum and Paph. helenae this species occurs on both sides of the border, in Vietnam and in China. It is a compact to miniature species and carries a unique flower reminding at Paph. spicerianum. Cultivation as for Paph. areeanum. We are currently the only importers of legal plants to the US! Flowers in winter.

Flower spread ca. 6-8 cm.

FS, US \$ 35.-



# Paphiopedilum villosum var. boxallii f. atratum

The meaning of atratum is 'wearing black', and our batch of seedlings from selected plants found in Southwest Yunnan contains plants with near solid blackish brown dorsals. (see photo on the left). Cultivation as for Paph. villosum var. villosum. Flowers in winter.

Flower spread ca. 7-8 cm.



# Paphiopedilum villosum var. villosum

This is a long-standing denizen in cultivation and an important early parent in the plethora of standard complex hybrids. Our parent stock is of Chinese origin. This epiphytic paphiopedilum is easy to grow and develops into a nice specimen plant if cool to cold winters, warm humid summers and a free draining substrate are provided. Flowers in autumn.

Flower spread ca. 8-10 cm.

FS, US \$ 30.-



# Paphiopedilum wardii

This is a second generation *Paph. wardii* for which we used one of our best first generation seedlings, 'Hengduan Black Eagle' and pollinated it with the Japanese clone 'Tagara Black Wings' BM/AJOS & HCC/AJOS. The offspring have inherited the metallic shine on the mahogany petals from the seed plant and the broad petals of the pollen plant. Cultivation as for *Paph. callosum.* Flowers in winter.

Flower spread 8-10 cm.

FS, US \$ 25.-



## Paphiopedilum wardii f. alboviride

Our first generation of *Paph. wardii* f. *alboviride* seedlings is approaching flowering size. Shown here is the first flowering plant from this batch. This album form is as easy to grow as the chocolate-colored type form. Keep in mind that both forms dislike to become dry at the roots at any time. Should this happen once in a while, the plants become easy prey for false spider mites!

Flower spread 7-8 cm.

FS, US \$ 30.-



# Paphiopedilum Woessner Helene

Franz Glanz has registered this cross between *Paph. charlesworthii* and *Paph. helenae* in 2000. We have remade it with a small form of *Paph. charlesworthii* and offer quite a pretty miniature paph here. Cultivation as for *Paph. helenae*. By the way, for this and our other *Paph. helenae* hybrids teacups are too large to grow them in, if they have not more than 5-6 shoots! Flowers in autumn.

Flower spread 6-7 cm.



## Paphiopedilum Wottonii

In 1896 the editor of the Gardener's Chronicle, R.I. Measures, published *Paph.* Wottonii, the cross between *Paph. bellatulum* and *Paph. callosum*. Also known under its synonym *Paph.* Westpointense. Quite richly colored the proportionally large flower is carried on a short stem just over the mottled leaves. Flowers in spring.

Flower spread 7-8 cm.

FS, US \$ 30.-



## Paphiopedilum x wenshanense

This is the natural hybrid between *Paph. con-color* and *Paph. bellatulum*. Although often treated as a species the enormous variability in color and shape, as well as the constantly intermediate shape of the staminode leaves no doubt that this is the hybrid as indicated above, which forms populations in the wild and is fully fertile. We offer a wide range of forms in flowering size. Flowers in spring.

Flower spread 6-7 cm.

**FS**, **US** \$ 30.-



#### Phaius wallichii

Differs from *P. tankervilleae* by its larger, differently shaped and colored, forward-facing flower as well as being a taller plant. Our breeding stock is from South Yunnan and can be kept cool to intermediate in winter, i.e. if protected from direct frost it can be kept outdoors all year round in the warmer parts of the US. Flowers in early summer.

Flower diameter 12-14 cm.

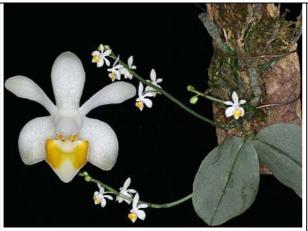
Seedlings, 30 cm tall, US \$ 15.-



#### Phalaenopsis chibae

An easy to grow miniature phalaenopsis species from Vietnam. It is placed in the same section as Phal. deliciosa but differs greatly from this and all other species. Best grown mounted but with excellent drainage grows also well in pots. Keep cool-intermediate to intermediate in winter and warm in summer. Flowers in spring.

Flower diameter 1-1.5 cm.



## Phalaenopsis malipoense

A pretty miniature phalaenopsis from Southeast Yunnan. It is closely related to Phal. lobbii, but has spreading sepals and petals and a flower of just over half its size. The leaves are of a silvery green. Cultivation as for Phal. chibae. Uncommon in cultivation. Flowers in spring.

Flower diameter ca. 1.5 cm.

FS, US \$ 35.-



#### Phalaenopsis stobartiana

The Yunnan form offered here is a very attractive phalaenopsis with apple green flowers, a white coloumn and a magenta lip. The flowers usually appear in a dense cluster on the semi-pendulous inflorescence. Very rare in cultivation and a real gem on any phalaenopsis colletion. Cultivation as for Phal. wilsonii. Flowers are fragrant and appear in spring.

Flower diameter ca. 1.5-2 cm. FS, US \$ 60.-



# Phalaenopsis wilsonii

This species is the hardiest of all phalaenopsis. Our breeding stock is from Yunnan and used to slightly warmer winters. In summer it can be grown under tropical conditions with night-day temperatures from about 26-36 °C (79-97 °F) and copious watering. Winters have to be cool (15-20 °C / 59-68 °F) and dry for successful flower set. In nature the leaves are dropped in winter, in cultivation it is better to retain the leaves through regular watering. Needs to be mounted. Flowers are fragrant and appear in spring.

Flower diameter ca. 1.5 cm. FS, US \$ 25.-



#### Renanthera citrina

A rare species from SE Yunnan and N Vietnam. Like with most Chinese orchids a monsoon cultivation regime with cool dry winters and warm humid summers insures healthy growth and regular flowering. The plant can be grown in pots with coarse substrate but is best kept in baskets or mounted. Flowers in spring.

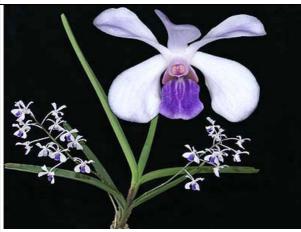
Flower diameter 4-5 cm. FS, US \$ 35.-



#### Vanda alpina

A distinct miniature vanda that is rarely seen in cultivation, where often the related but larger and in flower somewhat different *V. cristata* disguises as *V. alpina*. Has to be grown mounted or in baskets for best results, in pots only with coarse substrate. Keep cold to cool in winter and intermediate to warm in summer. Requires light levels as for dendrobiums, i.e. bright, but not so bright as for tropical vandas. Flowers in late spring to early summer.

Flower diameter 1.5- 2 cm. (very limited) FS, US \$ 60.-



#### Vanda coerulescens

A lovely compact vanda with small whitish flowers possessing intensively purple to blue lips. Our breeding stock is of Chinese origin and very cold tolerant in winter (in dry state near freezing temperatures are without consequences and even brief slight frosts are tolerated). Keep the plant cold and on the dry side in winter, warm and humid in summer. The plant can be grown in pots with coarse medium but does best in baskets or mounted. Flowers in spring.

Flower diameter ca. 2.5 cm. FS, US \$ 30.-



#### Vanda concolor

This species usually gets 60-80 cm tall and 30-40 cm wide. Our breeding stock is from Southeast Yunnan, where the species occurs as a lithophyte and epiphyte. Cool to intermediate winters with reduced watering and warm summers with copious watering are required as well as mounted cultivation. Growing in substrate-free baskets is also possible. Flowers in spring.

Flower diameter ca. 3.5-4 cm. FS, US \$ 35.-, large plant US \$ 45.-



#### Vanda cristata

More common in cultivation than *V. alpina* this species is larger (nearly double the size when fully grown) and differs also clearly in the flower. Cultivation as for *V. alpina*. Flowers in early spring to spring.

Flower diameter ca. 3.5-4 cm. FS, US \$ 35.-



#### Vanda flabellata

Until recently this plant was known as *Aerides flabellata*, but DNA analysis has shown that it belongs to *Vanda*. Cultivation for Vanda flabellata is like for most Chinese orchids, cool and drier in winter, warm and humid in summer. Best kept in a basket or mounted. Flowers in spring.

Flower height ca. 3-3.5 cm.

FS, US \$ 25.-



#### Vanda himalaica

Another species, the former *Ascocentrum himalaicum*, that was placed into Vanda, but with rather poor support! In fact the species is probably better at home in *Holcoglossum*, with which it shares more characters than with *Vanda*. Cultivation as for *V. alpina*, but the pendulous plant can only be grown mounted. Flowers in late autumn to early winter.

Flower height 1.5-2 cm. (limited) FS, US \$ 30.-



# Vandoglossum Hengduan's Stefanie

We crossed the tiny Holcoglossum flavescens with Vanda cristata and created a lovely miniature to compact intergeneric hybrid with a nicely fragrant flower. We named it after our younger daughter, Stefanie Perner, the girl that can be seen with Phaius wallichii a few pages above. Cultivation as for the parents. Flowers in spring.

Flower spread 7-8 cm.

#### **Miscellaneous Plants**



### Asarum splendens

A wild ginger from Southwest China, with beautifully marked leaves (usually 15-20 cm long) and an interesting flower that lies on the ground under the leaves. The evergreen leaves stand down to 10 °F (-12 °C). Should they die from frost, new ones will appear in spring. Can be grown as a groundcover in a well-drained woodland garden or in pots, needs shade. Flowers in spring.

Flower spread 4-5 cm.

FS, US \$ 15.-



# Neolepisorus ovatus f. truncatus

An uncommon ornamental fern from South China (Guizhou & Guangxi), were it occurs in subtropical mountain forests in limestone areas. It is an ideal companion for Chinese paphiopedilums and has the same cultivation requirements regarding temperatures and light. The fronds get 25-35 cm tall and the plant stays compact, i.e. is not widely creeping.

Divisions with 3-5 fronds, US \$ 20.-

**Cymbidium List Autumn 2015** 

Cymbidium	Photo	US\$
Cym. changningense		40
Cym. cochleare		40

Cym. dayanum	25
Cym. devonianum	30
Cym. erythraeum	40
Cym. erythraeum f. flavum	80
Cym. faberi 'Red Lip'	35

Cym. faberi 'Bailiangzi'	35
Cym. faberi 'Wenzhousu'	45
Cym. finlaysonianum	15
Cym. finlaysonianum album NFS	40
Cym. floribundum	30
Cym. kanran album	45

Cym. kanran 'Pink'	45.
Cym. kanran 'Redlip'	60
Cym. kanran 'Yellowlip'	30
Cym. kanran 'Makesu'	35
Cym. kanran 'Roundlip'	30
Cym. ensifolium 'Baodaoxiannu'	20

Cym. ensifolium 'Hongyimei' intense fragrance		75
Cym. ensifolium "Qingshanyu- quan'		45
Cym. ensifolium album 'Swan'		25
Cym. ensifolium 'Hongxiangfei' fragrant		25
Cym. ensifolium 'Zijinlongmei'		45
Cym. goeringii 'Biyuyuanhe'	Cymbidium Goeringii Biyuyuanhe'	30

Cym. goeringii 'Cuitao'	65
Cym. goeringii 'Dafugui' variegated strain	60
Cym. goeringii 'Dafugui' bell flowered strain	40
Cym. goeringii 'Dafugui' open flowered strain	35
Cym. goeringii 'Datuanyuan'	30
Cym. goeringii 'Ruimei'	25

Cym. goeringii 'Songmei'	45
Cym. goeringii 'Xueshanbiancao'	40
Cym. lancifolium	30
Cym. lowianum var. concolor	80
Cym. maguanense	40
Cym. mastersii	25

Cym. qiubeiense		25
Cym. sichuanicum		40
Cym. sinense album		25
Cym. sinense compact form		25
Cym. sinense 'Fuguijinlong'		35
Cym. sinense 'Jinniao'	28.02.2008 12:	20
Cym. sinense 'Minnanludi'	0.08	45

Cym. tortisepalum var. tortisepalum	25
Cym. tortisepalum var. tortise- palum album	25
Cym. tortisepalum var. longi- bracteatum 'Longchangsu'	25
Cym. tortisepalum var. longi- bracteatum	20
Cym. tortisepalum var. longi- bracteatum 'Dahongzhusha'	35
Cym. tortisepalum 'Daxuesu'	30

Cym. tracyanum	35
Cym. tracyanum f. album	90
Cym. wenshanense	40