

Cypripedium hybrids – Jewels of the shaded Garden

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Hardy lady's slipper orchids have long been regarded as difficult and expensive. But this is only true for the wild species. Unfortunately most of the plants on the market originate from nature and not from cultivation or artificial propagation and this is the reason why many people had bad results with these garden orchids. However, at the end of the 1980's two hobby breeders in the U.S. and Germany, Carson Whitlow and Werner Frosch, started hybridizing various *Cypripedium* species and already Werner Frosch's first attempt was a big hit. *Cypripedium* 'Gisela' still today is one of the easiest and most vigorous hybrids, doubling the number of shoots and flowers every year. I know of a clump in a garden with more than 400 flowers after ten years, stimulated by dividing every few years:



Cypripedium hybrids turned out to be much less demanding than the species (as long as the right parentage has been chosen), they showed new colours and bigger flowers. Today approximately 180 hybrids have been registered at the Royal Horticultural Society in London and the number is still rising. Of course not all hybrids are really garden-worthy, but the potential is basically not smaller than with the tropical lady's slippers for indoor use. Breeding and cultivation takes place only 70 years after the tropical orchids, but with the same promising future prospect. Recent progress has been made by developing a cloning technology for *Cypripedium* hybrids. This makes it possible to offer genetically identical plants.

Up to now nearly all hybrids on the market have been produced from seed, crossing species A x B, with the consequent variation within the seedlings. However, these seedlings all have the same name, e.g. 'Gisela' for the cross *macranthos* x *parviflorum*. So in contrary to perennials, the names of the *Cypripedium* hybrids only indicate registered crosses of two specific species. The International Nomenclature Code of Cultivated Plants allows cultivar names for groups of similar seedlings, so most orchid hybrids are named correctly. While these are cultivars, they are not clones. Now you will understand how important the source of any hybrid is (e.g. 'Gisela' from two different breeders can differ markedly) and what a big step forward the development of clone lines by using *in vitro* techniques is.

But even the fastest *Cypripedium* hybrids need one year in the lab from seed to a small seedling (orchids need to be sown on a sterile medium in the lab in order to germinate successfully) and another three to five years in soil until their first flower. This means that perennial growers better buy flowering sized or nearly

flowering sized rhizomes, leaving the production to the few specialist nurseries worldwide, and secondly that the price can't be low. Fortunately Cypripedium hybrids are no mass culture, they require some guidance when selling and the market yet has to be build up. We are at the very beginning of a dynamic rise, but still little knowledge is present among hobbyist and professional horticulturists as well.

My prognosis is a market share like the tropical lady's slippers (Paphiopedilum) or perhaps a bit less than Hosta within the next ten years. The vigour and performance of the garden slippers is convincing. We just have to overcome the reluctance to buy the first Cypripedium hybrid, then any customer will buy again after one or two years, independent of the price. Cypripedium hybrids are long-lived (decades), produce more shoots every year and are completely hardy (reports from Europe and North America speak of -25°C to -30°C and only thin snow cover without any problems). When these facts become more well-known and widespread, more and more garden hobbyists will make this experience and the Cypripedium hybrids will make their way on the market.



As you may be interested already, here are my **hints for cultivation** in your nursery:



Cypripediums grow best when planted out in shaded beds, but pot culture is also possible (11 cm square pot). I recommend a shade tunnel or shading with wooden laths from spring till autumn. Lady's slippers don't like direct, hot sun – originally they were dwellers of light woods. A lath shading provides a constant stream of cool air – ideal for Cypripediums.

Only allow direct sun in the early morning or late afternoon, at all other times it is too intense.

The shadow on the north side of a building or greenhouse provides ideal conditions. A shade tunnel also provides the cool climate which *Cypripediums* love. In this case, preferably use a 60-70% aluminized shade cloth (e.g. Svensson OLS 60 or 70). This material will reflect both the sun light as well as the heat radiation, which is equally important.



The soil mix is less important as long it remains fluffy and well-aerated. The addition of inert mineral compounds ensures durable aeration and drainage. Fertilizing is especially important during the formation of the shoots in spring. The leaves should always be vibrant green. Most common fertilizers for perennials are suitable; best are those with a long-term effect (e.g. Osmocote 3-4 M).

In winter temperatures of -20°C or lower are no problem, even for potted plants. During winter protection from direct sun is beneficial, for potted plants essential, in order to prevent the plants from thawing during daytime. Otherwise the temperature fluctuation causes losses, especially in the first winter after potting. Additionally, covering the pots with brushwood from spruce trees is recommended. Please don't use a frost protection fleece. Mice like to live under its shelter and the possibility of rot and early start of growth is increased.

Last but not least, a few comments regarding the current **market situation**:

Private customers are still relatively uninformed and, therefore, rather reluctant when it comes to buying. The word hasn't got around yet how well and easily *Cypripedium* hybrids grow in the garden. Recent low-priced mass offers of *Cypripediums* from the Netherlands will gradually change this trend, so giving fresh impetus also to the exclusive end of the market. As with the hostas it will take approximately 5-10 years to establish consumer awareness of this plant group which should then lead to buying without question. Until then, additional information is necessary to promote selling and active vendors will certainly be able to secure a good position on the market.

Happy growing!

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