

## Yellow Lady's Slipper – *Cypripedium calceolus*

On 15 August, the Catholic Church celebrates the Assumption of the Virgin Mary. In Austria, this day used to be called “herb consecration day” as various herbs received the blessing of the Holy Mother in various celebrations. These herbs were bound together in little bunches and used later for medicinal purposes. The only exception was the yellow lady's slipper. Also called Mary's lady's slipper, or Krimhild's helmet, it probably owed it to its name to be given special attention. Particularly as with its slight sedative and toxic effects due to the presence of cypripedin and quinoids, it does not make sense to use the lady's slipper for medicinal purposes.

Its fascination lies more in its height (80 cm) unusual for an orchid, and its mystical appearance: the dark, reddish brown, convoluted and curled petals, and fused sepals stand out symmetrically and surround the yellow slipper-shaped swollen labellum. Already in the Antiquity it was compared to the shoe of the goddess of growth and love. Kypris in greek (rom. Cypris) was the surname of Aphrodite (rom. Venus) named after her ancient place of worship, the city of Paphos in Cyprus and the latin word pedis (greek pódition) means foot. Linné then added the species name calceolus, which translated means “small shoe”.

As a result of its popularity, this rare orchid is an endangered species in Austria as it gets dug up and picked, but also because its populations are small and isolated, semi-natural forests are turned into timberland, and because of forest road constructions. In the northern and south-eastern foreland and in the area of Pannonikum it is even classified as highly endangered. As the species is at the top of the nature protection scale, the only remaining occurrence in the United Kingdom, near the city of York, is being watched over day and night by nature conservationists when it blooms.

The lady's slipper is not only the largest indigenous orchid, it is also one of the most dangerous ones, at least if you are a bee. The lovely smell and the spectacular shape are very attractive to insects. They settle on the edge of the labellum, crawl around, slip on the oily poke-shaped platform and fall into the ovary. A viscous layer on the inside of the labellum prevents the insects from crawling out and makes it almost impossible for them to exit the ovary through its point of entry. The only exit leads to the anthers that deposit pollen on the bee. It is guided to it by a transparent window in the “slipper”. Insects will not find any nectar or other type of food in the lady's slipper. With this particular pollination mechanism which attracts various bees (mostly only once!) to the flower of the lady's slipper, the fertility of the flowers is rather limited. Even in a good year, only between a quarter and a third of the flowers produce capsules and therefore seeds.

Because of the limited reproduction rate, the digging up or picking of orchids has a particularly dramatic impact and it is not surprising that this plant is under strict protection.