

Maxillaria striata: a jewel in the wild

PASCAL SAUVÊTRE describes how this
attractive orchid grows in its natural habitat,
and how to grow it in cultivation

THE GENUS *Maxillaria* is a very extensive one, though the majority of the species find but little favour in gardens.

There are, however, a few exceptions, principally among the large flowered species, and as these have the merit of being easily grown and very floriferous, it is a wonder that they are not more generally cultivated. The present species is one of these large-flowered kinds, which, judging by dried specimen and a coloured drawing, should find favour among amateurs who include the *Maxillarias* in their collections.'

These lines by Robert Rolfe, which preceded the description of *Maxillaria striata* in the first issue of *The Orchid Review* in 1893, are still true. It is puzzling why the genus *Maxillaria*, in particular the large-flowered species belonging to the Grandiflora alliance, are not grown much more widely today.

The establishment of the genus

The genus *Maxillaria* was described briefly by Ruiz and Pavón in 1794 in *Florae Peruviana et Chilensis Prodromus*. This publication was the first presentation of their numerous discoveries during their 10-year expedition to the vice-royalty of Peru (in fact, Peru and Chile). Their second work, *Systema Vegetabilium Florae Peruviana et Chilensis*, was intended to comprise several volumes with detailed descriptions and illustrations of their finds, but due to lack of finance only the first volume was published, in 1798. In this, Ruiz & Pavón list 12 species of *Maxillaria* but of these, only *M. platypetala* and *M. longipetala* are now recognised as belonging to the genus. Apparently the two Spanish pharmacists did not have a clear idea of the exact characters of their new genus. Later, as more and more orchid species were discovered in tropical America, the number of *Maxillaria* species increased, despite European botanists



The Tungurahua volcano in Ecuador

Pascal Sauvére

having no precise taxonomy to follow. It was not until 1843 that John Lindley produced the first revision of *Maxillaria* and since then, particularly in recent years, several American botanists have partially revised this confusing genus.

Maxillaria introduced to Europe

In the first third of the 19th century, most of the *Maxillaria* species that were introduced to cultivation in Europe came from Brazil, Venezuela and Mexico. From about the middle of the century, botanists turned their attention more to the ranges of the Andes in Colombia, Ecuador and Peru. It is from that part of the world that the finest species of *Maxillaria*, in the Grandiflora alliance, can be found, such as *M. elegantula*, *M. fletcheriana*, *M. huebschii*, *M. lehmannii*, *M. molitor*, *M. nutans* and *M. sanderiana*, to list some of the better known.

The discovery of *M. striata*

In 1870, Luigi 'Luis' Sodiro started his mission to Ecuador with the Jesuits. Born in Italy in 1836, he remained in

Ecuador until his death in 1909. Like several other missionaries, he had a passion for natural history and found many new plants – he was one of the first to specialise in the *Araceae*. Sodiro found *Maxillaria striata* and Rolfe described it in 1893 (*Orch. Rev.* 1: 265–266), but gave no details of how it was discovered although he mentioned that it was native to Peru and was first grown by Lucien Linden in his nursery in Brussels, L'Horticulture Internationale. It was there that *M. striata* first flowered in Europe, in August 1893. The type specimen was lodged in the Berlin-Dahlem herbarium, which was destroyed by bombs in 1943.

Maxillaria striata in the wild

Maxillaria striata occurs in Ecuador and Peru. It grows both epiphytically and terrestrially in cloud forest on the Amazonian slopes of the Andes, at altitudes of 1,000–2,500m. Plants can form large clumps that flower spectacularly, mainly between January and May. The distinctive flowers are ➤

10–12cm across, orange-red, veined with maroon-purple, with a strong, pleasant, fruity scent and last for more than six weeks.

A trip to Ecuador

While visiting Ecuador in January and February 2004, my three companions and myself decided to stay for a time in Baños, in Tungurahua province. We knew that this area was rich in orchids; it is a natural link between the eastern ranges of the Andes and the Amazonian forest, thanks to the Rio Pastaza valley. Starting from Baños, which lies at an altitude of 1,826m, it is easy to reach the forest lying between 1,500 and 2,500m in less than half an hour by car or in a few hours on foot.

Baños is a charming little town in the colonial style, known for its therapeutic warm springs. These result from the Tungurahua volcano, which dominates the town, rising to 5,023m. This active volcano makes a big impression on anyone seeing it for the first time; the inexhaustible plume of smoke escaping from the summit is a reminder of the power hidden in its heart. It particularly impressed us, tourists who knew only quakes caused by the Paris metro. After a few days, we became used to the menacing presence. (However, we were reminded of it recently, when we heard about a new eruption on 6 February 2008.)

Exploring the local area

The volcanic activity of this region counts for little compared to the great variety of plants in the surrounding area. Around Baños, for example, many species of *Maxillaria* can still be admired, including *M. fletcheriana*, *M. molitor*, *M. sanderiana* and, of course, *M. striata*. The region is still rich in orchids, in spite of human activity – the wooded slopes of the Rio Pastaza have been replaced by pasture and fruit and vegetable

cultivation. However, patches of forest still remain and some plants manage to survive even in the farmed land. So it was that at around 1,700m, walking along a road beside a cattle-pasture fence, I saw, about 50m away, a large clump of vegetation from which emerged orange flowers. Set on a rock and surrounded by some bushes, there was a magnificent plant of *Maxillaria striata* with over 50 flowers. Forty of these were open, emitting a strong, delicious, sweet and fruity perfume, rather reminiscent of orangeade – what a natural spectacle. I thought that if such a plant could be exhibited at an orchid show, it would win all the votes and all the prizes.

When my excitement had eased, I noticed that this abundant annual flowering had produced very little in the way of fruit – only one dry, open capsule from the previous year was present. However, that at least had fulfilled its function of spreading seed and perpetuating the species.

The habitat

At midday, this plant, facing west, found itself in light but effective shade; the meagre shrubs and little tree ferns that surrounded it gave protection from the sun from the east and particularly the south. The rock was covered by a mat of humus, moss and lichen about 18cm thick, and also provided shade to some other orchids, such as species of *Sobralia* and *Pleurothallis*. What might be the age of such a plant, over 60cm in diameter with so many flowers – 20 years... 30 years?

Continuing on our way, rather regretfully, about 20m or so further on, I found a fine clump of *Maxillaria molitor* growing on a grassy bank, just starting to flower. Almost opposite, in an old citrus orchard, I found some young plants of *Maxillaria striata* growing on fragile branches, one of which was just about to produce its first flowers – what a walk! I hope

that sometime I shall be able to revisit these Ecuadorean roads and admire such marvels once again.

Cultivation

Although *Maxillaria striata* enjoyed great popularity when it was introduced to Europe towards the end of the 19th century, it has almost disappeared from orchid collections today. However it is an easily grown orchid. This group of *Maxillaria* requires a temperate climate with cool nights and warm days, as in its natural habitat. The day temperatures there are moderated by the relatively cool wind, which is usually blowing, and by the shade of trees and shrubs. In the wild, the substrate has good water retention, leading to the humus and thick moss.

Maxillarias in the Grandiflora alliance should ideally be grown in temperatures between 15°C at night and 20–22°C during the day. They can not stand continued high temperatures – a temperature over 30°C for a period of several weeks would prove fatal. They also need 60 percent shade at the height of summer. They need a lot of water, and the most suitable compost is made up of 5 parts of sphagnum and 3 parts of pine bark. They should be watered once or twice a week and misted frequently. Soaking the pot is preferable in summer.

Maxillaria striata is best grown in a basket, as some flowers can open at the bottom. Nine years ago, in March 1999, I bought a plant of *M. striata* at the RHS London Orchid Show. It has flowered every year between the end of August and mid-October. In 2007, I was pleased to have 20 flowers, but I am still far from doing as well as Mother Nature. ■

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Above The author's plant of *Maxillaria striata* grown in a basket, with 20 flowers in autumn 2007
Right A clump of *Maxillaria striata* in the wild
Below *Maxillaria molitor* growing near *M. striata*



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