

# Some strange *Pleurothallis*

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outlines *Pleurothallis* section  
*Macrophyllae-fasciculatae*  
and discusses and illustrates  
a selection of species



THE GENUS *Pleurothallis* is a vast world full of strange species – over 1,600 are known, reaching from Mexico to northern Argentina. Not many amateurs grow them because it is widely believed that they need a cool glasshouse; however, most species of *Pleurothallis* adapt well to intermediate conditions.

The genus has been divided into numerous sections and subsections. Here, I will focus on some of the species in section *Macrophyllae-Fasciculatae* which are curious in their flowers, their foliage, or both. Most of the species here are miniature plants, and often very floriferous.

### History and botany

Section *Macrophyllae-Fasciculatae* was named by Lindley in 1858, based on the Venezuelan *Pleurothallis grandiflora*. The derivation of the two names, one Greek – *makrophyllon*, meaning large leaf, and the other Latin – *fasciculatus*, meaning fasciculate, refers to the fasciculate (clustered) inflorescences arising from the base of the large leaf. In 2005, Carlyle Luer raised this section to the genus *Acronia* (Luer 2005). This has not been accepted in *Genera Orchidacearum volume 4*, where *Acronia* is given as a synonym of *Pleurothallis*, but the name is becoming used by many growers.

Plants consist of a stem bearing a single, usually leathery, heart-shaped or lanceolate leaf. The new leaf emerges from a succession of bracts, its tip turns down while it is growing then becomes horizontal when fully grown. Young leaves are often purple or chestnut in colour and very soft in texture, taking several months to become hard and leathery. The root system is often extensive, with many vigorous roots running in all directions.

Inflorescences arise from a spathe where the leaf joins the stem. Each



2 *Pleurothallis scurrula*

leaf produces flowers over several years; usually a leaf lasts from 5–7 years. Flowering may be cyclical (at particular times of year) or may occur throughout the year whenever conditions are optimal. The flowers are resupinate or nonresupinate, held erect above the leaf or lying delicately on top of it. Some species produce many flowers at the same time, while others have only a single flower. The dorsal sepal is usually erect or reflexed; the lateral sepals are joined to form a synsepal which may be convex, concave or flat. The petals spread out from the rest of the flower like two little arms. The lip can take many forms. The anther is like an animal mask, with the two pollinia in the centre looking like a beak, while two frontal lobes give the impression of eyes, completing the appearance of a bird's head.

### Typical habitat

Most species in the section grow on the flanks of ranges in the Andes at altitudes between 1,000 and 3,800m. Almost every day they receive heavy showers of rain at dusk then lie bathed in the clouds that envelop the peaks at night. Quite a number are terrestrial or low-level epiphytes, usually shaded from full sun. They can withstand a great range of temperature between day and night, sometimes down almost to freezing.

### Cultivation

Most species in this section are relatively easy to cultivate. They are usually grown in pots because of their height but smaller species can be mounted on bark or tree fern. They must be kept humid but not too wet. A suitable compost consists of half



3 *Pleurothallis fantastica*



4 *Pleurothallis nossax*

pine bark, a quarter wood charcoal and a quarter of Chilean or New Zealand sphagnum with the optional inclusion of small pieces of tree fern. Clay pots are more stable, allow excess water to evaporate and keep the root system cool in hot weather. The most difficult period is summer, when the temperature in a glasshouse can quickly exceed 30°C. Plants should then be watered daily or pots should be placed on saucers. To check if a plant is dehydrated, take a leaf between thumb and index finger and feel the texture, rubbing the mid-vein on the outside of the leaf gently with the thumb. If it feels firm, there is no problem, but if the secondary veins feel cord-like, then the plant needs water, preferably a long soak.

These plants love semi-shade; in direct sun, the leaves turn purple and then black on the margins. They need good ventilation throughout the year. Most species do not have a marked seasonal vegetative cycle, producing flowers and new leaves at any time – unlike most orchids, *Pleurothallis* tend to grow vegetatively as much in

autumn as in spring. They should be given alternate applications of growth (NPK 30:10:10) fertiliser and flower booster (NPK 8:16:32).

The tender young leaves are liable to be attacked by slugs and snails and can also rot if a drop of water remains on them. The growth of a leaf is controlled by the tip and if this is cut, eaten or partially rotted, the leaf will not grow but remain small. It is often during hot periods that new leaves rot and so it is inadvisable to apply fertiliser in summer.

### How to mount them

The most satisfactory mount is a slab of flat, rather thin cork bark on which is fastened a slice of tree fern 5–8mm thick (choose the type with a spongy texture). Place the base of the plant with the roots on the tree fern, then make a sausage of sphagnum to surround the roots. Finally, tie this all firmly to the slab of bark; the pad of sphagnum protects the roots from possible damage. This method helps to keep plants moist and cool in hot weather. Within a month, the new

roots will start to grow, attaching themselves first to the tree fern, then to the bark. In less than a year, the plant with its new roots should be well established.

### 1 *Pleurothallis dilemma* (syn. *Acronia dilemma*)

This species from Ecuador has both unusual leaves and flowers. Plants are small, 8–20cm tall, with leathery, convex, almost semi-terete leaves covered with light downy hairs. The leaf has two lobes at the base and the mid-vein forms a furrow, giving the plant a strange appearance. Young leaves do not have basal lobes and never flower. The inflorescences arise from a spathe 5–8mm long which dries very quickly as the leaf grows. The single flower lies against the leaf, it is 15–20mm long, deep purple and completely covered in light, downy hairs. The synsepal is convex, the dorsal sepal is the largest part of the flower. The petals are erect, the lip is unlobed and slightly swollen. The flowers last only for two to four days, but appear throughout the year



The petals of  
this Ecuadorean  
species are like  
two little arms



5 *Pleurothallis mastodon*

The petals are covered with fine hairs and encircle the rounded lip



6 *Pleurothallis nephroglossa*



except when it is hot. Each leaf can flower several times a year. This species cannot be confused with any other and is fairly rare in cultivation.

## 2 *Pleurothallis scurrula*

(syn. *Acronia scurrula*)

The scientific name of this Peruvian plant means 'little clown', referring to the appearance of the flower. Plants grow up to 15cm tall, with shiny, dark green leathery leaves, v-shaped in cross-section. When young, the leaves are salmon-coloured with darker veins. The spathe arises from the crease of the leaf and can produce many flowers over several years. The single flowers are nonresupinate, bright yellow-green and purple, held vertically above the leaf in a rather comical way. The yellow-green synsepal is broad and rounded, with a furrow in the centre holding the lip. The long dorsal sepal is slightly convex; the petals are reflexed, rose-purple in colour fading to translucent white at the tips. The lip is cherry red, deeper and glossy at the base. This species is very rare in the wild, known from a few mountain slopes in Peru, but in spite of this, it is fairly common in cultivation because it is compact and very free-flowering.

## 3 *Pleurothallis fantastica*

(syn. *Acronia fantastica*)

This species from Costa Rica has a very appropriate name. It is a medium-sized plant, 25–35cm tall. The leathery, concave leaves are 10–18cm long, soft green with fine purple lines, with slightly upcurved, purple margins that form a sort of nest for the flower. Behind the leaf a fleshy growth runs from the stem along the central vein. The spathe dries quickly, and is erect, arising from the lower quarter of the leaf. The flowers are held in the air and look like a bird taking flight. They are 8–10mm long and look small



7 *Pleurothallis volans*

compared to the leaf. The sepals are yellowish-white, the dorsal sepal is erect, and the synsepal is covered with fine downy hairs. The petals are semi-erect and the same size as the dorsal sepal. The lip is trilobed, white with a bright red patch in the centre, the mid-lobe is curled under, and the side lobes enfold the column. The pale yellow flowers last for several days and can appear at any time of year; each leaf can flower two or three times.

## 4 *Pleurothallis nossax*

(syn. *Acronia nossax*)

The stems of this Colombian species are 20–25cm tall, with leaves 7–10cm long. The leathery leaves are bright green with a deep mid-vein and are held almost horizontally. The inflorescence bears a single, bizarre flower, oval in shape but opening like a beak at the tip, with the lip protruding like a bird's tongue. The sepals are yellowish-white on the outside and light pink inside; the

synsepal is almost completely joined, forming a rounded hollow at the base then elongated into a point; the dorsal sepal is broad and sometimes held slightly away from the rest of the flower. The petals are pink turning darker towards the tips, lance-head shaped, with a very acute apex and barely protruding from the flower. The lip is deep pink, long and narrow. This species is very rare in cultivation.

**5** *Pleurothallis mastodon*

(syn. *Acronia mastodon*)

Plants of this Ecuadorean species are 12–18cm tall and form compact tufts. The leaves are 4–5cm long, dark green and fairly leathery; when young, they are salmon coloured, with darker veins. The small but bizarre flowers are 7–10mm long. The glabrous, concave synsepal is white with three purple stripes; and the dorsal sepal is reflexed and somewhat ruffled. The petals are like two little arms, the tips joining above the lip as if praying. The lip is deep purple with a central bright yellow stripe. Plants of *Pleurothallis mastodon* should be mounted to allow them to develop their natural, graceful habit. This species is very free-flowering throughout the year, and the old leaves flower throughout their lives. *P. mastodon* is fairly rare in cultivation because of the small flowers.

**6** *Pleurothallis nephroglossa*

(syn. *Acronia nephroglossa*)

This species from Ecuador is 15–25cm tall and has heart-shaped, slightly drooping leaves. The inflorescence is usually one-flowered but sometimes has two. The flowers are usually orange slightly tinged with pink, but occasionally are entirely bright pink. The synsepal is convex, pale orange with darker, longitudinal stripes and the dorsal sepal, pointed and reflexed at the tip, forms a hood over the lip. The bright orange petals are covered



**8** *Pleurothallis index*

with fine hairs and are like two arms encircling the lip. The lip is rounded and convex, the same colour and texture as the petals. The species flowers in autumn and spring with numerous flowers each lasting about a week. Each leaf flowers several times a year. It is fairly rare in cultivation.

**7** *Pleurothallis volans*

(syn. *Acronia volans*)

This species from Ecuador has a strange appearance with the leaves hanging down from thin, stiff stems 15–20cm tall. The leaves are 15–20cm long, dark green, leathery and flexible, with two rounded lobes encircling the top of the stem. Although young leaves can be as big as adult leaves, they do not have basal lobes nor do they produce spathes. Young leaves are very susceptible to rot and it is important not to leave drops of water on them when plants are watered. The spathe is erect, forming a kind of tube about 1cm long and producing a single flower. The flowers are yellowish-white, held above the leaf. The sepals are lightly streaked with

lines, denser but narrower on the synsepal than on the rounded, convex dorsal sepal. The petals have a distinctive shape like a lance-head. The triangular lip is a deeper yellow, with a hollow at the base encircling the column. This free-flowering species blooms several times a year; each flower lasts only for a few days but leaves continue to flower throughout their life of 5–7 years. It is fairly rare in cultivation.

**8** *Pleurothallis index*

(syn. *Acronia index*)

This little plant from Colombia and Ecuador has heart-shaped, soft green, somewhat pendent leaves 15–25cm long, terminating in a fine point. The spathe dries very quickly, producing a flower that seems to fly above the leaf. The yellow flower is shaped like a cross 25–30mm in diameter. The synsepal is completely joined and is slightly reflexed, the dorsal sepal is of similar size and also reflexed, hiding the stem of the flower. The petals lie at right angles to the sepals, completing the cross. The lip is

deeper, brighter yellow and lies on the synsepal. This species should be mounted to show off its elegant shape. The flowers only last for a few days but are produced throughout the year, except in hot weather. It is rather rare in cultivation.

#### 9 *Pleurothallis penelops*

(syn. *Acronia penelops*)

This Ecuadorean species is sought after more for its foliage than its flowers. The stems are up to 20–35cm tall, and the leaves are 15–20cm long, hanging vertically. They are stiff and leathery but fine-textured, the tips turned up like a comma, with two rounded lobes at the base encircling the stem, the mid-vein forming a deep furrow and the margins deflexed. The spathe is 1cm long and is held away from the leaf. There is usually a single flower, although two at a time is not uncommon. The flower is deep maroon-purple with a contrasting white column, only 12–15mm long, of a similar shape to the leaf, with the sepals and petals reflexed; the dorsal sepal is broad and convex. The triangular lip is deeper purple and has upcurved margins. The flowers only last for a few days but plants flower freely throughout the year, although less so in the hot season. ■

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9 *Pleurothallis penelops*