

Masdevallia coccinea

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THIS PAGE One of the more than 220 clones of *Masdevallia coccinea* grown by John Leathers in his greenhouse in Pacifica, California.
OPPOSITE John Leathers (above) evaluates some flowers of line-bred *Masd. coccinea* (below).

Seeing a long bench of this rainbow-hued masdevallias blooming at his northern California greenhouse leaves no doubt that this expert grower has mastered the culture of this difficult species



LIKE MANY HOBBYISTS, I discovered orchids by accident. In 1975, I purchased my first home, a 1918 wood-shingle craftsman home in Berkeley, California. This house came with a historical iron-and-glass solarium built onto the rear. Wanting to decorate the solarium, I made a foray to the University of California at Berkeley Botanic Garden's spring plant sale. One plant purchased was a hanging basket of *Stanhopea warscewicziana*, probably not the most common orchid for a beginner. Within a few months it bloomed with overwhelming fragrance. That orchid, because of its bizarre pendent flower, affectionately became known as "the dead chicken orchid." I became a committed orchidist.

As a result of joining local orchid societies, I met growers whose specific interest was cool-growing species.

Given the temperate climate of Berkeley, located across the bay from San Francisco, I decided to try a number of Andean species outdoors, in a shade house. *Masdevallia coccinea*, with its dazzling colors and impressive displays of flowers held well above the foliage became my passion. For the past 30 years I have been collecting clones of this species. With kind assistance from notable cool-growers such as the late Gary Baker of Seattle, Washington, Bob Hoffmann and Harold Ripley of San Francisco and more recently as a result of the superb line-breeding of Theresa Hill of Hillsview Orchids in Mulino, Oregon, I have built a *Masd. coccinea* collection of more than 220 clones.

The Colombian orchid *Masdevallia coccinea*, colloquially known as “*La Banderita*” or the little flag, was described in the mid 19th Century by Linden and popularized by the English firm of Veitch. The botanical Latin term “*coccinea*” refers to a bright, deep red color. *Masdevallia coccinea* is found from an elevation ranging from 8,000 to 11,000 feet (2,500 to 3,400 m) in moist areas of the cloud forest in moderate shade. Importations from different elevations yield a palette of colors, with white and light forms coming from the higher elevations and darker forms from the lowest. Early collectors describe seeing *Masd. coccinea* blooming as masses of flowers in dazzling brilliancy, with an astonishing variety of colors from deep rich crimson-purple, through magenta-crimson, crimson-scarlet, scarlet, red, orange, yellow and white.

CULTURE I have grown *Masd. coccinea* in a greenhouse at my home as well as a shared cooperative 3,400 square foot (315 sq m) greenhouse in Pacifica, California, located 5 miles (8 km) south of San Francisco on the Pacific Coast.

Temperature Successful culture of *Masd. coccinea* requires moderate moist day temperatures with a significant (10 F [-12 C] or more) drop in night temperatures. In a greenhouse, a position near cool moist air such as a swamp cooler or wet pad suits *Masd. coccinea*. Good air movement is important; however, the air should not be dry and warm. Ideally, a day temperature of 70 F (21 C) and a night temperature of 50 F (10 C) suits *Masd. coccinea*. These plants will tolerate a wider temperature range. Summer days in my area, in spite of our temperate climate, can rise to the 90s F and winter

nights can drop near freezing. *Masdevallia coccinea* can tolerate such extremes but does not do well if they persist for long. Like most orchids, plants of *Masd. coccinea* cannot survive a freeze.

Humidity Ideal humidity should be in the 40 to 70 percent range. Excessively dry air will result in leaf-tip burn while excessively humid conditions retard growth.

Light The plants require diffuse or filtered light of moderate in intensity (800 to 1,500 foot-candles). Avoid direct sunlight.

Watering Growers should aim for moist but not wet conditions. Plants should never be allowed to completely dry out; however, it is important not to keep the substrate too wet. A good way to tell when to water is to lift the pot and feel its weight. Pushing one index finger into the substrate at the edge of the pot helps gauge dryness. When grown outside the moist atmosphere of a greenhouse, plants benefit from the humidity resulting from placing them above a pan or plate of water using gravel, rocks or a screen to keep their container out of the water. *Masdevallia coccinea* does not have a significant rest period and requires water throughout the year; however, water should be reduced in the winter.

Fertilizing These plants are light feeders but require good-quality water. A balanced orchid fertilizer, applied at every other watering, at the rate of ¼–½ teaspoon per gallon (1.2–2.4 ml per 3.8 L) works well. If you use a conductivity meter aim for a value of ~400–500 uSiemens or about 250 ppm (part per millions) total dissolved solids. Pots should be flushed with water at each watering to prevent the buildup of salts.

POTTING The growth habit of *Masd. coccinea* is best accommodated in pots slightly taller than wide. The roots of this species are long and tend to push the plant up and away from the medium as the plant grows. It is a good idea to pot at least ¾ inch (2 cm) below the rim of the pot. Plants should not be overpotted and, like many orchids, need both moisture and air at their roots. My preference is for an open mix such as sphagnum moss or a bark mix (made of equal parts fine fir bark and perlite). Both mixes should be pre-wet before use. When using either mix do not compress the substrate more than necessary as this will compress



the air spaces that benefit the plant. It is important not to allow the plant to remain in medium that has broken down. Such medium kills roots by restricting air and staying excessively moist. I replot annually.

BLOOMING TIME The blooming season for *Masd. coccinea* March to July. Plants stay in flower for a month or more with most blooms opening about the same time. In good light, flowers are self-erect and do not need staking. Moving the plant after spikes have initiated may result in twisted stems. It is important to use care in watering to prevent knocking over the stems. *Masdevallia coccinea* can be used as a cut flower, lasting a few days after cutting. Adding alcohol, such as 5 percent vodka, will make cut flowers last a bit longer.

PESTS AND DISEASE In my temperate conditions, the major pest



for *Masd. coccinea* is aphids. These can be dealt with by softly wiping the buds and stems with a damp cloth. An effective pesticide for aphids is Orthene, applied at the rate of 1 tablespoon per gallon (15 ml per 3.8 L). The genus *Masdevallia* is unusually susceptible among orchids to insect-borne virus. Aphids can spread yellow-bean virus with symptoms of chlorotic blotches. With no cure available, a plant showing signs of virus should be discarded. Cutting tools should be sterilized to prevent the spread of virus. When repotting, do not reuse medium and be sure to sterilize containers before using them again. Additional pests are slugs and snails. Be especially alert for bush-snails. These small beasts wreak havoc by eating root tips. Because of my cool conditions, insects such as mealybugs and spider mites are not a problem with *Masd. coccinea*.

ABOVE *Masdevallia coccinea* requires moderate moist day temperatures with a significant (10 F or more) drop in night temperatures. Here, hundreds of plants crowd the benches in the author's greenhouse.

RIGHT John Leathers and Bob Hamilton (right) view plants of *Masd. coccinea* at Hawk Hill Orchids in Pacifica, California.

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