

Orchid Species Culture by Charles & Margaret Baker

Miltoniopsis phalaenopsis (Linden & Rchb. f.) L. A. Garay & G. C. K. Dunsterville

AKA: *Miltonia phalaenopsis* (Linden & Rchb. f.) Nicholson, *Miltonia pulchella* hort. ex Linden, *Odontoglossum phalaenopsis* Linden & Rchb. f.

ORIGIN/HABITAT: Colombia. Originally found in central Colombia on the western slopes of the Cordillera Oriental near Ocaña. Plants also grow near Velez in humid, temperate forests at 3950-4900 ft. (1200-1500 m).

CLIMATE: Station #80094, Bucaramanga, Colombia, Lat. 7.1°N, Long. 73.2°W, at 3937 ft. (1200 m). Temperatures are calculated for an elevation of 4500 ft. (1370 m). Record extreme temperatures are not available for this location.

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
°F AVG MAX	74	75	75	74	75	75	75	76	76	74	74	74
°F AVG MIN	64	64	65	64	64	64	64	64	63	63	63	63
DIURNAL RANGE	10	11	10	10	11	11	11	12	13	11	11	11
RAIN/INCHES	0.8	1.5	1.6	3.6	3.0	1.8	2.2	2.4	2.5	2.6	3.7	1.1
HUMIDITY/%	N/A											
BLOOM SEASON	*		*	**	***	**	*	*	*	*	*	
DAYS CLR	N/A											
RAIN/MM	20	38	41	91	76	46	56	61	64	66	94	28
°C AVG MAX	23.4	23.9	23.9	23.3	23.9	23.9	23.9	24.4	24.4	23.3	23.3	23.3
°C AVG MIN	17.9	17.8	18.3	17.8	17.8	17.8	17.8	17.8	17.2	17.2	17.2	17.2
DIURNAL RANGE	5.5	6.1	5.6	5.5	6.1	6.1	6.1	6.6	7.2	6.1	6.1	6.1
S/HEMISPHERE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

Cultural Recommendations

LIGHT: 1200 to 2300 foot candles. For those without light meters, this is not deep shade, but it is enough shade so that no shadow or only a slight shadow results when a hand is passed between the plant and the light source. It is about the same amount of light required by many Paphiopedilums, and a little less than needed by Cattleyas. Because the light requirement is low, *Miltoniopsis* are easy to grow under artificial lights if humidity is moderately high. *Miltoniopsis* species produce the most blooms when they receive as much light as they can tolerate without causing damage to the foliage. A slight pinkish tinge on the leaves indicates correct light levels, while red, yellow, or straw colored leaves indicate that light is too high. The sepals and petals of some *Miltoniopsis* tend to recurve when light is high. Flower quality often improves if plants are moved to lower light after the buds develop. At 2,500 foot candles, many *Miltoniopsis* species turn red or get sunburned. Yet, a little red or pink tinge on the foliage is perfect. Strong air movement at all times is recommended. If air movement is minimal, plants will not tolerate brighter light.

TEMPERATURES: Throughout the year, days average 74-76°F (23-25°C), and nights average 63-65°F (17-18°C), with a diurnal range of 10-13°F (6-7°C).

HUMIDITY: Records are not available for this location, but humidity averages in the habitat are probably near 80% year-round.

WATER: Rainfall is relatively constant most of the year, with a drier 23 months in winter. More moisture probably is available in the habitat than is indicated by the rainfall averages at the weather station. Cultivated plants should be watered heavily while actively growing, but drainage must be excellent, and conditions around the roots should never be stale or soggy. Water should be reduced somewhat after new growths mature.

FERTILIZER: 1/4-1/2 recommended strength, applied weekly when plants are actively growing. Many growers prefer use a balanced or high-nitrogen fertilizer all year. Others, however, use a high-nitrogen fertilizer from spring to midsummer, then switch to one high in phosphates in late summer and autumn. A complete fertilizer including "minors" [trace elements] is needed if plants are grown in an inorganic medium. A hydroponic fertilizer with a 3-1-2 ratio works well. Some growers adjust the pH of the fertilizer solution down to 5.5-6 pH using a product called pH Down. Something similar should be available from a hydroponic supply store. One grower always adds 5-7 drops of SuperThrive per gallon of fertilizer. Growers using an inorganic media, should fertilize at every watering. Some growers use a fertilizer at 800-1,000 ppm, a very strong solution, but successful when other conditions are accurate. The philosophy being that with the right conditions, you can grow or push your plants to maximum growth rather than just letting them grow. This is a very aggressive cultural practice.

Miltoniopsis species seem to grow better if repotted every year, especially if a large amount of chopped sphagnum moss is used in the mix. Next to simply providing the basic requirements, annual repotting is probably the single most important action a grower can take to ensure success. Do not over pot! Plants should be placed in a small pot that is barely large enough to contain the roots and allow room for another year's growth. When repotting, do not simply "pot on" into a larger pot, leaving the rootball with the old, stale medium intact. All old medium should be removed, any damaged or diseased roots trimmed off, and the plant repotted using all fresh medium and a clean pot. Repotting is best done in autumn when new root growth begins, usually when the newest growths are about half mature. Repotting by early winter allows the plant time to become reestablished before the stress of hot, summer weather.

Plastic pots are usually preferred since they retain more moisture, but drainage must be excellent. A layer of coarse bark in the bottom of the pot improves drainage. Also, drainage holes in plastic pots may be enlarged and extra ones added by melting with a hot soldering iron. The fumes from the melting plastic may be toxic, so this particular task should be done out-of-doors or in a well-ventilated area.

NOTES: The bloom season shown in the climate table is based on cultivation records.

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Plant and Flower Information

PLANT SIZE AND TYPE: A 612 in. (1530 cm) sympodial epiphyte.

PSEUDOBULB/STEM: Up to 1.5 in. (3.8 cm) long. The rather small, pale green pseudobulbs are egg-shaped, strongly compressed, and completely hidden by sheathing, leaflike bracts.

LEAVES: To 12 in. (30 cm) long by 0.2 in. (0.6 cm) wide. A single, pale green, linear leaf is carried at the apex of the pseudobulb. The leaves taper to a pointed apex and are longitudinally folded at the base.

INFLORESCENCE: Somewhat shorter than the leaves. The scape, which is slightly flattened, emerges from the base of a recently matured pseudobulb along the axil of a basal sheathing bract. Two flower spikes may be produced by each flowering growth.

FLOWERS: 35. Blossoms have white sepals and petals that open flat. The lip is also white with bright red-purple streaks and blotches on the lateral lobes and midlobe. The callus at the base of the lip is yellow marked with fine reddish lines. Flowers are 2.02.6 in. (5.06.5 cm) across. The sharply pointed, egg-shaped to oblong sepals are about 0.8 in. (2 cm) long by 0.3 in. (0.8 cm) wide. Petals are broadly egg-shaped to oblong with bluntly pointed tips and are 0.8 in. (2 cm) wide by 0.5 in. (1.2 cm) wide. The spreading 3lobed lip is 1 in (2.5 cm) long by 1.1 in. (2.8 cm) wide across the widely spread midlobe. The lateral lobes are somewhat smaller than the midlobe and rather round. The larger, widely spread midlobe has a deep U-shaped notch in the center of the apical margin, giving it the appearance of being made up of 2 rather square lobes. The callus at the base of the lip is made up of 3 small blunt teeth. The small, erect column has very short wings near the apex.

HYBRIDIZING: Because it has relatively small flowers, *Miltoniopsis phalaenopsis* has not been used as frequently as *Miltoniopsis roezlii* and *Miltoniopsis vexillaria* in creating the modern *Miltoniopsis* hybrids. When used, however, it contributes the lovely purple mask to its progeny. In addition, *Miltoniopsis phalaenopsis* and the 'Memoria G. D. Owen' cultivar of *Miltoniopsis vexillaria* are responsible for the "waterfall" and "teardrop" patterns on the lips of many of today's popular hybrids.

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