

Judging *Miltoniopsis*

By Tom Etheridge, PhD

Until recently, *Miltoniopsis* was an aficionado's orchid, a plant that was only cultivated by experienced orchid growers due to a reputation for being difficult to grow. The exception has, until now, been in the Pacific Northwest where we are blessed with a climate almost ideal for growing these spectacular plants. Through breeding programs that have created grexes with a wider tolerance of cultural conditions, we now find them in grocery and home stores nationwide and, as a result, we are seeing more of them at orchid shows and other judging events. Without a doubt a flowering *Miltoniopsis* is a glory to behold and orchid growers everywhere benefit from their increased availability and ease of growth. As judges, though, we must be mindful of the traits that separate the simply beautiful from the exceptional.

The Royal Horticultural Society (RHS) only recognizes the genus *Miltoniopsis* (*Mps.*) for species, i.e. *Miltoniopsis vexillaria* or *Miltoniopsis roezlii*. All hybrids are listed under *Miltonia* (*Milt.*). This leads to potential confusion because two distinct and formerly synonymous groups, the high-elevation *Miltoniopsis* and low-elevation *Miltonia*, bear identical hybrid generic designations. Thus all *Miltoniopsis* hybrids are listed as *Miltonia*. The two groups are, however, distinct in both cultural and floral characteristics. The following discussion is concerned only with the high-elevation *Miltoniopsis*.

Of the six species currently assigned to the genus *Miltoniopsis*, *Mps. vexillaria*, *Mps. roezlii* and *Miltoniopsis phalaenopsis*, in that order, are the most influential in the hybrids. *Miltoniopsis warscewiczii* (recognized by the RHS as *Miltoniopsis endresii*) has enjoyed more frequent use since the mid 1990s with stunning effect. The remaining species, *Miltoniopsis bismarkii* and *Miltoniopsis santanaei*, first described late in the last century, have yet to be used extensively in traditional *Miltoniopsis* hybridization and will not be considered further here.

Conjure a mental image of a *Miltoniopsis* in your mind's eye: full, oblong flowers with pink to white coloration, a bat-shaped yellow-orange mask on the lip and well-arranged arching sprays held just beyond the foliage. *Miltoniopsis vexillaria* is directly responsible for this portrait. One need look no further than the depictions of this popular species in 19th century prints of Warner, Linden and Reichenbach to see that modern *Miltoniopsis* hybrids have diverged little in the past 100-plus years in these classic traits. Line breeding and the introduction of polyploid clones have improved the modern hybrids through increased size and fuller flowers that have less reflexing of the petals but the general image is unaltered. The difference today is that the presentation tends to be better, with the inflorescences held well above the foliage, and the floriferousness is generally greater.

The birth of *Miltoniopsis* hybridization came with the 1899 introduction of *Miltonia* Bleuana (*Mps. roezlii* × *Mps. vexillaria*). On the upside, this pairing brought the positive attributes of a broader color palette and better warmth tolerance. On the downside, it introduced lower flower count, more open form and a tendency to bury the flowers among the foliage. The deep reds, mahoganies and crimsons that we see today were created through selective breeding that emphasized the red-purple coloration on the petals of *Mps. roezlii* combined with the flower-wide pink coloration of *Mps. vexillaria*. Suppression of this coloration has yielded creams and unfading yellows with size comparable to the reds. The warmth tolerance of *Mps. roezlii* has essentially been lost due to repeated infusions of *Mps. vexillaria*, used to improve form and presentation.

Miltoniopsis phalaenopsis was introduced to *Miltonia* breeding in 1917 through *Miltonia* Venus (× *Mps. vexillaria*), a grex that has been remade many times and is still popular today. This beautiful species' most obvious contribution is its characteristic waterfall pattern on the lip, while reduced plant size (exploited most effectively in the Riopelle breeding program) and a compact, clumping habit, are added bonuses. As with *Mps. roezlii* this species has the unfortunate traits of reduced flower count and flowers hidden among the foliage.

Ivan Komoda demonstrated the promise of *Mps. warscewiczii* in hybridizing with the introduction of *Miltonia* Lady Snow in 1997. Though there are prior grexes, none have been awarded by the AOS or used in subsequent breeding to date. This species is most noted for its ability to produce up to six inflorescences

per pseudobulb, a trait that is passed on to its progeny. Unfortunate side effects are larger plant size, poor form and color and, for many observers, an unpleasant fragrance. Second and third generation hybrids are only now beginning to appear on judging tables.

The current point scale for *Miltoniopsis* already takes the disproportionate importance of the flower's lip into account for form and color. The revised point scale suggested here (Table 1; opposite page) leaves 70 percent of the valuation intact. Slight adjustments to substance and texture, habit and arrangement of inflorescence(s) and floriferousness are made to more accurately express these traits' impact on overall presentation. *Miltoniopsis* are not *Phalaenopsis*. Much of the beauty and impact of modern *Miltoniopsis* grexes comes from their ability to produce multiple inflorescences of well-arranged flowers on modest plants. A traditional, large-flowered *Phalaenopsis* with multiple spikes is the exception; a *Miltoniopsis* with multiple inflorescences is the rule.

The *Handbook on Judging and Exhibition* (11th edition) suggests using the *Miltonia* scale for any of the Oncidiinae in which the lip is the predominant characteristic of the flower. Please note that the scale suggested in Table I is specific to *Miltoniopsis*. Other genera with prominent lips, such as *Miltassia*, *Odontonia*, *Miltonia* (where *Milt. spectabilis* is the dominant influence), should use the *Handbook's* *Miltonia* scale because it more correctly reflects the importance of the traits whose values were modified here.

As it does with most of the nine groups afforded customized point scales, the *Handbook* states on page 52 that for *Miltonia* (*Miltoniopsis*), "The general form of the flower is toward fullness, roundness and flatness." Indeed, full flat flowers are to be expected but roundness here is relative as the ideal is not a round flower in the same sense as *Vanda*, *Cattleya* or *Odontoglossum*. Much of the charm in *Miltoniopsis* flowers arises from their overall slightly oblong to ovoid shape where the prominent lip balances the smaller, overlapping petals and sepals. Hence, in the *Miltonia* (*Miltoniopsis*) scale, the lip is granted a disproportionate 60 percent of the points for form.

The sepals should form a slightly flattened triangle that occupies the upper portion of the flower; the petals should be flat or slightly reflexed and should fill the gaps between the sepals, overlapping them slightly. Though significant reflexing of the petals and/or sepals is a fault, the degree of reflexing must be judged on an individual basis as it balances the proportion of the upper part of the flower to the lip. Flowers with more or less round lips are quite pleasing if the petals are somewhat reflexed but may appear oddly angular when the petals are fully flat.

The lip itself should be flat and symmetrical. The edges may be slightly wavy but not floppy and there should not be a prominent midrib. Older clones with pronounced waterfall patterns tended to have slightly cup-shaped lips but this should be considered a serious fault in modern clones. There may be a slight waist near the base of the lip (somewhat like a violin though much less pronounced) but this is only a fault if it compromises the symmetry of the lip or causes the lip to fail to overlap the sepals. Many clones bear no waist at all, their round lips leaving only the tips of the sepals visible. Note that grexes descended from *Mps. warszewiczii* tend to have a pronounced waist that often leaves the lower edge of the sepals exposed.

Color in all cases should be clear and, on multicolored flowers, should be either pleasantly blended or clearly delineated. No *Miltoniopsis* species bears brown flowers so muddiness of color should not be tolerated. The waterfall or mask on the lip should be a pleasantly contrasting color. It should be noted that many white, cream or yellow clones tend to blush pink soon after opening due to suppressed anthocyanin expression. Often this blushing is pleasant and should not be considered a fault if it provides a nice contrast to the flower's base color. If blushing is present it should be uniform, never blotchy. While many fine *Miltoniopsis* clones are known for their striking, intense coloration, many grexes have appeared recently that are equally striking in their subtle, pastel shading. Care should be taken not to confuse a pastel flower with a muddy one. For example, a soft pink that fades to white or cream still bears clear coloration whereas a rust-colored waterfall that fades as it descends the lip may render the apical third of the lip muddy.

The current point scale allots 10 points for substance and texture but the revised scale presented here reduces that to 5 points, analogous to *Paphiopedilum*. Texture is usually matte or occasionally crystalline. *Miltoniopsis* tends to have relatively thin substance, as compared to, say, *Odontoglossum*, yet the flowers can remain fresh for three to four weeks, thus substance and texture are not as important here as they are for

other genera. Because of their light substance *Miltoniopsis* flowers are prone to bruising, heat damage and drying.

This revised point scale affords 13 points to habit and arrangement to reflect the fact that exceptional plants from modern grexes are expected to bear unobstructed inflorescences of well-presented flowers. For example, compare the photograph of *Miltonia* Lycaena ‘Stamperland’ CCE/AOS (Lord Lambourne × Princess Margaret) in *Awards Quarterly* (vol. 36, no. 1, p. 45), which was registered in 1925, with *Miltonia* Lorene ‘Nattinee’, CCM/AOS (Paula Jean × Andrea Baker), *Awards Quarterly* (vol. 32, no. 1, p. 31), which was registered in 1984. The flowers should be spaced alternately along the inflorescence and should overlap only slightly if at all. Cluttered inflorescences of poorly spaced or ill-arranged flowers clearly detract from the overall presentation and should be considered a significant fault. A *Miltoniopsis* plant with spikes arising from multiple leads provides a magnificent, noteworthy display when these inflorescences are well arranged around the plant. Points should be withheld on specimens with lopsided displays. In *Miltoniopsis*, size is no less important than in any other group. Many awarded modern clones bear flowers with a natural spread of 12 cm, particularly on the vertical axis. Note, however, that grexes recently descended from *Mps. phalaenopsis* or *Mps. warszewiczii* may bear significantly smaller flowers. Roughly speaking, clones with waterfalls or three or more inflorescences per pseudobulb should not necessarily be expected to bear flowers as large as those from more traditional breeding lines. The intent of size considerations should not be to strive for uniform increases. Size should be judged relative to other attributes for creation of a proportionate, attractive presentation of flowers, rather than a few, massive, unwieldy ones.

Over the past century of *Miltoniopsis* breeding the real improvement has been in floriferousness, hence a 20 percent increase in the points afforded this trait in the revised scale. *Miltoniopsis* regularly produce multiple inflorescences per pseudobulb and a well-grown plant should bear flowers from every recently-matured pseudobulb. Well-grown plants, even first-bloom seedlings, should be expected to bear two inflorescences of at least four flowers each, more mature specimens bearing up to eight flowers per raceme. It is easy to be impressed by a plant with one spike of four large, colorful flowers but this is not representative of well-grown plants and points for floriferousness should be deducted accordingly.

The popularity of *Miltoniopsis* among novice and seasoned growers is on the increase. Modern clones that would have garnered awards only a few years ago are readily available in many supermarkets and home stores. A judge’s knowledge of the specific traits that set an exceptional plant apart is more important than ever as these beautiful, characteristic orchids find their much-deserved place in our collections.

Table 1. Proposed *Miltoniopsis* Point Scale.

Flower Form	
General Form	15
Sepals and Petals	6
Lip	9
Total	30
Color of Flower	
General Color	15
Sepals and Petals	6
Lip	9
Total	30
Other Characteristics	
Size of Flower	10
Substance and Texture	5
Habit and Arrangement of	
Inflorescence(s)	13
Floriferousness	12

Total

40

Total 100

Tom Etheridge, PhD, is a probationary judge in the Pacific Northwest Judging Center. 1112 Northwest Solar Place, Corvallis, Oregon 97330 (e-mail tomandlu@rollyridge.com).