

Judging Multifloral Paphiopedilums

By Thomas F. Kalina

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There is a simple difference in the point scales used to judge single flowered and multi-flowered paphiopedilums effective with the eighth edition of the Handbook on Judging and Exhibition. Prior to the eighth edition only one point scale was used to evaluate both types. That scale, if followed literally, favored the floral characteristics exhibited by the complex or "Bulldog" Paphiopedilum hybrids over the multi-flowered species and primary type hybrids. However, the AOS judging community had apparently already evolved to a modified form of evaluation for the multifloras since more multifloras had been awarded over the five-year period prior to the change than the complex types. Instead of representing a dramatic change effective with the publication of the eighth edition of the Handbook, the new scale may simply reflect the reality of a judging modification which was already being followed on an informal basis by a significant number of AOS judges.

Excerpt from the Eighth Edition of the Handbook on Judging and Exhibition (Section 6.1.6 Paphiopedilum):

"The majority of judged paphiopedilums currently grown, from species through primary hybrids to the modern complex hybrids, makes criteria, uniformly applicable to all, impossible to define.

The majority of judged paphiopedilums are those having a single flower on a upright stem; these are scored using the "Paphiopedilum" point scale in section 6.2.4. Those having several flowers on an upright stem or arching inflorescence are commonly termed multiflora paphiopedilums and should be scored according to the general point scale section 6.2.1, as their floriferousness and arrangement of inflorescence are of substantial importance.

In the judging of species and those hybrids with parentage near to the species, the general criterion is improvement over the ancestral types(s). The natural spread of flowers with long pendulous petals depends on the angle at which the petals are held, and should be interpreted as the greater of the horizontal or vertical dimensions.

The appearance of complex hybrids is the result of many generations of selective breeding that have obscured the contributions of the many species in their ancestry. The desired form of complex hybrid flowers is round, or broadly oval, with particular emphasis on fullness, balance and proportion. The dorsal sepal should be large, rounded, slightly

concave and not reflexed. The petals should be broad and their length should be in proportion to the rest of the flower.

The pouch should be full, in proportion and not protrude excessively forward. The ventral sepal should afford a harmonious background for the pouch; a split ventral sepal is not in itself a defect if its effect on the overall appearance of the flower is pleasing. The stem should be proportionately tall and strong, holding the flower well above the foliage. The color of the flower should be clear and definite in well defined areas and patterns, or harmoniously suffused, according to breeding. Due to polyploidy, substance in complex paphiopedilums is generally heavy and is now expected as a necessary feature. Texture should be waxy or varnished. Size is based on the overall spread of the flower, with emphasis on the width of the dorsal sepal."

FORM OF FLOWER (30/100 pts.)

When compared to the Paphiopedilum Point Scale, the General Point Scale is less demanding as far as the number of points allocated to flower form (30/100 vs. 40/100). However, one must not minimize the importance of obvious form faults in judging the multiflora paphiopedilums. Notice that, while the Paphiopedilum Point Scale is quite specific regarding the distribution of points for general form as well as that of each of the Paphiopedilum flower parts, the General Point Scale which is used to judge the multifloras contains no such specificity. One should keep in mind that these are still members of the genus Paphiopedilum. If we stray too far from the distribution ratios established by the Paphiopedilum Point Scale, especially in the area of form, the results may be problems of flower balance. If we assume the correctness of the above logic, and in the absence of specific guidance in this area by the Handbook on Judging and Exhibition, I would recommend the use of the following point distribution within the General Point Scale when evaluating the form of the multiflora paphiopedilums:

1) General Form	(15)
2) Sepals	(7)
3) Petals	(4)
4) Pouch	(4)
TOTAL	(30)

General Form (15) - The first thing to look for when evaluating a multiflora Paphiopedilum for general form is overall symmetry of the flower parts to the vertical plane when viewed from the front. The ideal form of the flower would exhibit true bilateral symmetry along a line which bisects the dorsal sepal, staminode, pouch and synsepal. While such symmetry is indeed rare, when present it results in a well-balanced appearance and is a major factor in the decision to grant or withhold an award, all other factors being equal.

Next, the flower should be viewed from each side to determine the degree of flatness. Flatness, or its absence, is established by the alignment of sepals, petals and the ventral portion of the pouch when viewed from the sides. The closer these flower parts are to alignment along a given plane, the flatter the flower will appear. Ideally this line should approach, if not achieve, a vertical orientation. As a general statement, the form of a multiflora hybrid should be an improvement over the parents, while multifloral species should represent an improvement over the ancestral type.

Sepals (7) - The form of the dorsal sepal in multifloras should be as flat as possible. Many members of section Coryopedilum (especially Paphiopedilum adductum, Paph. kolopakingii and Paph. glanduliferum) exhibit a "hooded" dorsal sepal, i.e., one which does not fully extend to the vertical plane when viewed from the side. However, the more erect the dorsal sepal is, the better.

Table 1

THE MULTIFLORAL PAPHIOPEDILUM SPECIES

Orchidaceae

Cypripediodeae

Paphiopedilum

Paphiopedilum

Brachypetalum

Coryopedilum

Brachypetalum

adductum

glanduliferum

kolopakingii

Parvisepalum

philippinense

randisii

rothschildianum
sanderianum
stonei
supardii
Pardalopetalum
haynaldianum
lowii
parishii
Cochlopetalum
glaucophyllum
liemianum
victoria-mariae
victoria-regina
primulinum
Paphiopedilum
Barbata

Cribb, 1987 - The Genus Paphiopedilum

The species within section Pardalopetalum, such as Paphiopedilum haynaldianum and Paph. lowii, also tend to exhibit varying degrees of dorsal sepal reflexing. Any tendency for reflexing. Any tendency for reflexing of the dorsal sepal should be considered a fault. The issue of bilateral symmetry once again applies to the position of the dorsal sepal and synsepal when viewed from the front. Ideally, they should be equally bisected by the same imaginary vertical midline. Is the right side of the dorsal sepal a mirror image of the left side when bisected by the mid-line? If not, it will affect the overall balance of the flower. In many cases this problem is not fully appreciated until one views a photograph or slide of the awarded flower.

The multifloras may exhibit a synsepalum smaller than the dorsal sepal, although there are exceptions to this, especially among the recent high awards to *Paphiopedilum rothschildianum*. The form of the synsepal should ideally approach flatness, with any tendency toward reflexing also viewed as a fault. While a split synsepal is more common among the complex *Paphiopedilum* hybrids it is rare in the multiflorals, and is generally regarded negatively when present. It is preferable to have the dorsal sepal and synsepal in alignment when viewed from the side, a necessary characteristic for flower flatness.

Petals (4) - Petal form is influenced greatly by the ancestral species in the background of multifloral hybrids. Generally speaking, when evaluating whether the flowers to be judged represent an improvement in petal form over the ancestral type, one must look for such characteristics as evenness and degree of twisting as well as bilateral symmetry along the vertical axis. The relationship of the petals to the horizontal axis when viewed from the front (petal deflection) is also an important characteristic because of its impact on the measurement of overall natural spread as well as form. Unequal petal deflection has a negative effect on flower form and is considered to be a fault. If one petal exhibits a different degree of deflection than the other, this provides a point of distraction and results in an imbalance in the flower. Ideally, both petals should exhibit equal deflection along their entire length to the tips.

If the petals or petal tips have a tendency to curve, this curve should be exhibited to the same degree and direction by both petals. If one petal curves in a different direction than the other in sections other than *Cochlopetalum* (in which this is typical), it is considered to be a fault and should be scored accordingly. Reflexing of petals is also considered to be a fault, and aside from its effect on form, will also affect the measurement of overall natural spread of the flower. When viewed from the side it is important to remember that the ideal form would demonstrate the petals to represent an extension of the base of the dorsal sepal. In other words, they would appear to be in the same alignment and plane. When this particular characteristic is present, the result is a "flat" flower which is very desirable as it adds to the overall flower balance. It is important that this alignment occurs close to the vertical, otherwise the combination of a hooded dorsal sepal and petals which follow the line of the dorsal, could well result in a flower that, while flat, also faces downward.

Pouch (4) - In general, most members of section *Coryopedilum* exhibit two pouch form faults. One is the tendency for an inferior pouch cleft and the other is the characteristic forward-jutting pouch that one associates with this section and its hybrids. *Paphiopedilum adductum*, *Paph. rothschildianum*, *Paph. stonei* and *Paph. supardii* are particular examples of species within this section that demonstrate these characteristics - *Paphiopedilum glanduliferum* does so to a lesser extent. While we have limited knowledge of the inheritance patterns which will be shown by the hybrids of *Paph. adductum* or *Paph.*

supardii, we do know that Paph. rothschildianum and Paph. stonei hybrids tend to display these characteristics to a greater degree.

When looking for an improvement over the ancestral type, one must look for hybrids from this section which lack either a pouch cleft or the strongly jutting pouch, or which exhibit these characteristics to the lesser degree.

The negative effect of a forward jutting pouch is especially unattractive when combined with a hooded dorsal sepal. When this happens, the general form appears closed with both the front surface of the dorsal sepal and the staminode obscured. Also, look once again at the bilateral symmetry of the pouch and staminode. (We are addressing the form of the staminode here, since it is not covered elsewhere.) The pouch and staminode should be equally bisected by a line which extends from the midline of the dorsal sepal through the midline of the synsepal. If the staminode is offset from this midline or the pouch exhibits lateral deflection, these are considered to be faults. The surface of the pouch should either be smooth in its entirety or exhibit slightly raised venation of a uniform nature. Any, unevenly distributed raised horns, warts or projections which appear to be developmental or genetic defects are considered to be significant flaws which detract from the overall appearance of the flower. In judging, one must be able to differentiate between such "fatal" flaws and lesser, more scorable defects.

COLOR OF FLOWER (30/100 POINTS)

The "General Point Scale" used to judge color in most of the multifloras lacks clear direction regarding distribution of point values among the flower parts. Such definition is quite clear in the Paphiopedilum Point Scale (40/100). It is interesting to note that within point scale, color and form have equal point values:

1) General Color	(15)
2) Sepals	(7)
3) Petals	(4)
4) Pouch	(4)
TOTAL	(30)

General Color (15) - As a general rule, the color evaluation of any orchid flower is greatly influenced by the quality and quantity of light present in the judging environment. I would recommend, if at all possible, that color evaluation of multiflora paphiopedilums occur in natural daylight. Where this is not possible, every attempt should be made to create viewing conditions that approach, or duplicate, daylight. It is a basic fact that the same color can appear to be muddy, bright, clear or a different color altogether, depending upon the quality and quantity of light present in the viewing area. Evaluation of flower color under daylight or under artificial conditions approaching daylight will minimize this variability.

Overall flower color should be clear, not muddy. The closer the color gets to pure hues and tones, the more dramatic the display will appear. Do not expect to see the wide variation in color within a species that could be expected in the hybrids. When looking for improvements in color over the ancestral type or parents, look for improvements in clarity, brightness and saturation as well as improvement in the sharpness and definition of flower markings.

Sepals (7) - Many of the multiflora paphiopedilums exhibit varying degrees of stripes and spots on the dorsal sepal. When present, such markings should be clear and sharply defined. Lines or stripes should extend to the edge of the sepal and not fade at either end unless such characteristic is not typical of the ancestral type. *Paphiopedilum haynaldianum* (Section *Pardalopetalum*) exhibits varying degrees of spotting in the dorsal sepal. The better flowers of that species will have sharply defined spots against a bright rose colored background.

Petals (4) - Multiflora paphiopedilums exhibit a wide spectrum of petal coloration and markings. Once again, one looks for clarity of base coloration and sharply defined markings. If elongated bars of color are present in the petals (as in the cochlopetalums), they should be darker than the base color and sharply defined. Any tendency for paleness in such markings should be considered a color fault. Many of the corypedilums have a combination of warts and stripes in the petals. We look for the even distribution of these warts along the margins of the petals and the sharpness of the contrast between the stripes and the base petal color.

Pouch (4) - The pouch color should be even and exhibit good color saturation. Any color break, tendency toward fading or irregular shading must be considered a fault, especially when viewed from the front. Although it is not unusual for the back of the pouch of many of the species and primary hybrids to be lighter in color than the front of the pouch, the "perfect" pouch color would be evenly dark and wrap all the way around.

OTHER CHARACTERISTICS (40)

There are some real differences between the point scales when we look at "Other Characteristics." It is here that we evaluate the purely multifloral morphology. The 20 points that were gained by reducing both form and color point values by ten in the "General Point Scale" are assigned here to characteristics unique to sections Coryopedilum, Pardalopetalum and their hybrids. Notice that we have excluded section Cochlopetalum. While sections Coryopedilum and Pardaleptalum exhibit a sequential/simultaneous flowering habit, section Cochlopetalum exhibits a successive one. That is, the flowers usually open one at a time along a continually elongating stem. As one flower fades, the next bud is ready to open.

As a result, flowers of plants from section Cochlopetalum are evaluated using the Paphiopedilum Point Scale, although they are technically included in the multifloras, because there is usually only one flower per inflorescence to judge. (This is also a case where it is acceptable to judge the next flower to open on the same inflorescence at a future date.)

We will now discuss each of the "Other Characteristics" that account for the majority of the points in the "General Point Scale."

Size of Flower (10) - Much has been said and written about the importance of size when judging orchids in general. You will notice that size has exactly the same value in either of the scales, so it is just as important when judging the multifloras as when judging the unifloras. In either case, it is only 10 points out of 100! However, as stated by Alvin Bolt at last fall's Mid-America Congress in Knoxville, it is the first 10 points.

Size in terms of natural spread is determined by the angle of the petals. For this reason it is important to take vertical as well as horizontal measurements. Both measurements should be recorded if an award is granted. The wider and/or longer the sepals and petals are, the better, as long as the flower remains in balance. Wide dorsal sepals and petals lead to a rounder and fuller form.

Substance and Texture (10) - The point value to be used when judging the multifloras for "substance and texture" is twice that allocated by the "Paphiopedilum Point Scale" used for judging the complex hybrids (10 vs. 5). This is because heavy substance is now "expected as a necessary feature" among the complex hybrids according to the Eighth Edition of The Handbook on Judging and Exhibition, and is almost never absent in this type of breeding. The same applies to texture where virtually all flowers exhibit a distinctly waxy and varnished appearance. Such characteristics are not as common among the multifloral species and hybrids, and are therefore assigned greater relative importance.

COMPARISON OF JUDGING POINT SCALES

	Paph.	General	Prop.*
1. Form of Flower	40	30	30
General Form	20	-	15
Sepals	10	-	7
Petals	5	-	4
Pouch	5	-	4
2. Color of Flower	40	30	30
General Form	20	-	15
Sepals	10	-	7
Petals	5	-	4
Pouch	5	-	4
3. Other Characteristics	20	40	40
Size of Flower	10	10	10
Subst./Texture	5	10	10
Stem	5	-	-
Habit/Arrangement			
Of Inflorescence	-	10	10
Floriferousness	-	10	10

Total Points:

100

100

100

*Proposed point distribution for judging of multiflora paphiopedilums

TABLE 2

Many years have passed since the first multiflora hybrids were developed in the 19th century, and there has been little further activity beyond the primary phase until just recently. As we begin to experience third and fourth generation complexity among the multifloras, we should also see improvements in substance and texture as a result of selection and polyploidy.

Briefly, substance should be heavy and firm. Any tendency toward thinness or limpness should be considered a fault. Texture should approach waxiness and exhibit a varnished appearance. Some striped dorsal sepals, especially in the species and hybrids derived from section *Coryopedilum*, will have a crystalline sheen to the white base color which is quite pleasing.

Habit and Arrangement of Inflorescence (10) - Now we will address two of the three other characteristics which are specific to the multiflora paphiopedilums and how 10 of the 20 point reduction for form and color is reallocated within the "Other Characteristics" section of the "General Point Scale."

The stem on multiflora paphiopedilums will be either arching or upright, but rarely straight. Ideally it should be strong enough to support the weight of the flowers without staking. If staking was used it should have been applied progressively to the elongating stem to allow proper orientation of the buds prior to opening. We have all seen the result of improperly applied staking of multiflora inflorescences. If a weak inflorescence is staked after the flowers have opened and set, the result will be an unnatural flower orientation. You cannot deny the force of gravity and its effect on the opening flower. On an improperly staked inflorescence, the flowers will appear to be looking upward. The flowers should be well spaced along the stem, neither crowded nor widely separated.

On some multifloras, the buds nearest the base of the stem will open first and the remaining buds will continue opening in sequence until, finally, the bud nearest the end of the stem has opened. This is called a sequential blooming habit, typical of the *Pardalopetalums* such as *Paph. lowii* and *Paph. haynaldianum*. It is not uncommon among

these species and their hybrids to have the first flower to open begin to fade as the last flower to open reaches its prime.

Simultaneous bloomers, those which have all buds opening at more or less the same time, are found in section *Coryopedilum* with *Paph. stonei* and *Paph. glanduliferum* being good examples of this type of bloom habit. However, very few are truly simultaneous.

A successive blooming habit is typical of section *Cochlopetalum* and its hybrids. Normally, one flower at a time opens, finally wilts, only to be replaced by the next developing bud on the same inflorescence. Each successive flower can be judged on its own, even if it is on the same stem as a flower which may have been previously judged and screened. *Paphiopedilum Victoria-mariae*, *Paph. Victoria-regina* (syn. *chamberlainianum*) and *Paph. primulinum* exhibit a successive blooming habit. Hybrids between sections *Pardalopetalum* and *Cochlopetalum* such as *Paph. Henrietta Fujiwara* (*haynaldianum* x *primulinum*) can inherit both a sequential and successive blooming habit, with several flowers open along the stem with new buds forming at the tip. This type of multifloral hybrid tends to be in bloom for an extended period of time.

Floriferousness (10) - In most cases one should expect to see at least three to five flowers open on the species and hybrids of sections *Pardalopetalum* and *Coryopedilum*. Section *Cochlopetalum* will generally present one, or rarely, two flowers open at the same time on the same inflorescence and should be judged using the *Paphiopedilum* Point Scale, the same one used for single flowered *paphiopedilums*. The expected number of flowers in hybrids between any of the multifloral sections can be estimated by multiplying together the number of flowers expected on each of the parents and then taking the square root of the resultant number. This is called the geometric mean, and is also used to estimate size expectancy as well.