

## The Relevance of Breeding Lines to Judging

By Roger Cole

Published in Summer 1988 Awards Quarterly, Vol. 19, No. 2, page

A most useful yet difficult concept in judging orchids is the pertinence of closely related hybrids to the standard for a flower being considered. The terms "line of breeding" or "breeding line" are not mentioned in the *Handbook on Judging and Exhibition* and discussions of the merits of a flower do not have it as a topic. But it is used intentionally or instinctively by many judges.

For a most obvious example, the frame of reference of a typical white *Cattleya* is not just other clones of the same grex nor even the grex and the two parents. Practically all experienced judges will draw on their full knowledge of *Cattleya* Suzanne Hye offspring in forming their standard for judging a flower of this background.

The reason for this is that almost all of these hybrids are genetically the same. It makes little sense to judge one grex by a different standard than another grex just because the clones that happened to bloom and be awarded from it were atypically good or bad relative to the broad group.

When it is important to use a different standard for evaluating a flower is when it has a distinctive background. In the white example, this would clearly arise with the introduction of a bifoliate species, such as *Cattleya loddigesii*, *Cattleya walkeriana* or *Cattleya intermedia*.

The addition of a bifoliate species to the parentage requires a change in the standard. But the concept of a line of breeding is still useful. Both *Cattleya* Carol Ackerson (*intermedia* x Dorothy Mackaill) and *Cattleya* Louise Georgianna (*intermedia* var. *alba* x Souvenir de Louis Sander) are immediate hybrids of *Cattleya intermedia*. You use your knowledge of both to judge either of those grexes or a hybrid of either back onto a standard white, such as *Cattleya* Candace Beth Shaffer (Louise Georgianna x Bow Bells).

These hybrids, in turn, are a partial basis for evaluating *Cattleya* Clear Mom, the hybrid of *Cattleya* Morne le Blanc, a standard white, and *Cattleya* Claesiana. Because *Cattleya* Claesiana is *Cattleya intermedia* crossed with *Cattleya loddigesii*, the standard for *Cattleya* Clear Morn also has to consider such related hybrids involving *Cattleya loddigesii* as *Cattleya* Juanita Wong (Henrietta Japhet x Bob Betts) and *Cattleya* Mount Baker (Bow Bells x Henrietta Japhet).

If a judge is familiar with *Cattleya* Candace Beth Shaffer and *Cattleya* Mount Baker, there is an immediate mental standard as to what an award-quality *Cattleya* Clear Morn should look like. Even with knowledge of only one of the related hybrids, the other species involved in this line of breeding provides a basis for mental adjustment to create a standard.

Some caution should be exercised in this type of extrapolation, however, lest there be an unbalanced excusing of faults or overlooking of new strengths. Typically, the gain in one feature is balanced by a loss in another feature and the judge must evaluate where the overall change belongs relative to the standard he sees for such a grex. Most of the hard work in judging comes in deriving a good standard. After this, the assigning of a point score for the flower is rather mechanical and mundane.

When a judging problem arises, the concept of breeding line can provide a rescue.

Imagine, for instance, the judges in California who were contentedly judging *Cattleya*

*labiata*-type hybrids and cymbidiums in March 1964. *Sophrolaeliocattleya* Jewel Box ‘Spellbound’ (*Cattleya aurantiaca* x *Sophrolaeliocattleya* Anzac) was presented for consideration and no one had seen such a hybrid. While it was evidently awardable, it certainly wasn’t clear what standard to judge it by. Obviously, the typical *Cattleya* standard wasn’t right. And while it was a *Sophrolaeliocattleya* in name, the main *Sophrolaeliocattleya* features evident were red color and the trait of developing buds successively. Knowing what the judges then knew, how could a standard for judging it been created?

The breeding-line approach could have given the judges a good start toward a standard. *Sophrolaeliocattleya* Anzac — which the judges knew was bred from more than half *Cattleya labiata* types and contained an eighth *Sophrolaelia* Psyche for its red coloration — had had a number of offspring awarded. Knowledge of these gave a basis for assessing the degree of excellence of the color of *Sophrolaeliocattleya* Jewel Box and a partial assessment of its shape.

In contrast, there was little knowledge of the contribution of *Cattleya aurantiaca* to hybrids. One grex that was known, however, was *Cattleya* Wolteriana, the hybrid of *Cattleya aurantiaca* and *Cattleya schroederiae* ‘The Baron’, FCC/RHS. This 1909 hybrid was a perfect standard except for color. The shape of *Sophrolaeliocattleya* Jewel Box was excellent when compared to the range of *Cattleya* Wolteriana, which should have had more shape, being a direct descendant of a shape-dominant *Cattleya labiata*-type species. Similarly, flower size and number of flowers were very good.

By this evaluation, I feel that the 80-point Award of Merit granted was quite a bit too low. Without reference to parallel hybrids, the judging problem of the first appearance of a good new direction in breeding, such as *Sophrolaeliocattleya* Jewel Box, is very difficult, with little alternative to an arbitrary agreement on an award. Using the breeding-line approach, it is possible to determine that the flowers were quite outstanding. And I think everyone would agree that the better clones of *Sophrolaeliocattleya* Jewel Box are still excellent and comparable to the very best hybrids of *Cattleya aurantiaca*.

The analytic technique used for *Sophrolaeliocattleya* Jewel Box is — in some senses — an integrating technique to apply instances of partial knowledge to a judging problem. We still have need of such an approach, particularly in developing areas, such as *Oncidium*-alliance intergenerics. If a judge has seen a dozen different hybrids of *Oncidium leucochilum*, for instance, he or she has a clear idea of what an exceptional hybrid from it might be. When a fine hybrid of *Oncidium* Elegance appears (such as Goodale Moir’s cross with *Miltassia* Cartagena to make *Aliceara* Dorothy Oka) it is easy to use this knowledge to create a mental standard. In the case of *Aliceara* Dorothy Oka, the fine color expected from *Oncidium leucochilum* even dominated the well-known reluctance of *Miltassia* Cartagena to breed color. The contrast to *Brassidium* Longlen (*Brassia longissima* x *Oncidium leucochilum*) and *Brassidium* Wild Warrior (*Oncidium leucochilum* x *Brassia* Stardust) is clear when the strengths from *Miltassia* Cartagena are present with no real color losses.

In the area of miniature cattleyas, we now face another judging problem related to a new hybridizing direction. When a new hybrid of *Sophrolaelia* Psyche with a “mini-catt” that has substantial *Cattleya luteola* in it appears, it is only reasonable to compare it with the fine clones that have come from *Sophrolaeliocattleya* Yellow Doll (*Cattleya luteola* x *Sophrolaelia* Psyche), *Sophrolaeliocattleya* Ginny Champion (*Cattleya* Baby Kay x

*Sophrolaelia Psyche*) and *Sophrolaeliocattleya* Deborah Off (*Sophrolaelia Psyche* x *Sophrocattleya* Beaufort). Similarly, crosses of *Sophrolaelia Psyche* with hybrids that have a high proportion of *Cattleya labiata* in their background need to have a standard that considers *Potinara Sweet Amy* (*Sophrolaelia Psyche* x *Brassolaeliocattleya* George King) and *Sophrolaeliocattleya* Little Hazel (*Sophrolaeliocattleya* Hazel Boyd x *Sophrolaelia Psyche*).

The immediate parents of a grex and the cultivars of that grex that may have received awards are not enough of a basis for scoring an inflorescence because it makes each grex a unique “parentage.” Although many grexes are unique, it would be a distortion of judging to act as if all grexes were truly that different from broader groups of similar hybrids.

When a new line of breeding appears, judges often are very conservative in making awards. This is understandable and commendable. Even when you extrapolate from related knowledge, as discussed here, there is often a considerable area of uncertainty. I do not feel that it is correct to refuse to judge a flower for lack of knowledge. As judges, we are there to judge and we have as much knowledge as is available. It is correct to be careful, giving only an award very likely to be deserved. But we do need to recall when our scoring has been dampened by uncertainty. When the plant reappears, we need to judge it anew and not just decide that it is not much better than when we made our prior decision.

Recently at the Washington Supplemental Judging Center, we judged a plant of *Sophrocattleya* Beaufort ‘Elmwood’. It had been judged nearly a decade before and given a score in the low 80s. Since then, we have had a much better idea of how good this clone is when contrasted with the many other “mini-catts” with mostly *Sophranitis coccinea* and *Cattleya luteola* in their ancestry. Based on this, we scored *Sophrocattleya* Beaufort ‘Elmwood’ anew and it was awarded an AM of 88 points. This should be done more often.

For a number of years, we have had discussions of whether some crosses are overawarded and I think that this discussion becomes clearer when approached from the perspective of the breeding line. The hybrid most often cited as a clear example of overawarding is *Ascocenda* Yip Sum Wah (*Vanda* Pukele x *Ascocentrum curvifolium*). By the end of 1985, a hundred flower awards had been given to this exceptional hybrid. If *Ascocenda* Yip Sum Wah was only judged against the standard of itself and its two parents, there is considerable plausibility to a claim that it is overawarded. But this is not the standard that *Ascocenda* Yip Sum Wah is judged against. Rather, *Ascocenda* Yip Sum Wah is judged against the more general standard of the large number of hybrids between *Ascocentrum curvifolium* and vandas with a predominant *Vanda sanderiana* background. Against this standard, the better clones of *Ascocenda* Yip Sum Wah are clearly among the best. The large number of awards to this grex is a good indication that most judges instinctively or consciously have used the broader standard for measuring *Ascocenda* Yip Sum Wah.

Another example of a past use of breeding line comes when there is a need to change the standard for judging a group of orchids. As recently as the mid-1970s, we were granting awards to spotted complex paphiopedilums under much the same standard as we had used for two decades. But starting in the early 1970s, we began to see a number of the hybrids of *Paphiopedilum* Winston Churchill (Eridge x Hampden) and other fine parents,

such as *Paphiopedilum* Great Pacific (Pacific Ocean x Winston Churchill) and *Paphiopedilum* Small World (Maori x Beauté). While these parents did not produce many clones that were as good or better than they were, they produced an exceptional number of clones that were sound awards under the old standard for spotted complex paphiopedilums. Compared to prior awards, the most notable improvement was that the petals were wider and held more flatly.

This change in the level of quality of spotted complex paphiopedilums was generally recognized and — without any specific discussion on judging standards — most judges now have a very different standard for awarding a spotted *Paphiopedilum* than they had a decade ago. This transition came for a whole breeding line, the spotted complex paphiopedilums, rather than for a handful of grexes. There was a need for a new standard and judges recognized it.

Despite the discussion of overawarding, the overall standard for the *Ascocentrum curvifolium/Vanda sanderiana* type of *Ascocenda* has not changed and judges have recognized this, too. One exceptional cross does not a line of breeding make. But in spotted paphiopedilums, the breeding line standard changed without an outstanding grex appearing. This is because the standard is the general expectation and the accomplishment of a single grex within the broader line of breeding is not particularly pertinent to setting the standard.