The Well-Travelled Road to Red Cattleyas

By FRANK FORDYCE

Without doubt the uphill road to the breeding of red cattleya-types is as troubled as a California freeway. For years hybridizers have endeavored to capture the glowing crimson-red shades in "standard sized" cattleyas. Few have succeeded, for in the attempt to increase the size of the red species used, hybridizers have looked to the large red-purple shades and have diluted the true red coloring of the species into a range of bright reddish-hued purples, oranges, yellows and suffusions of art shades.

Let me first set the record straight regarding authorities in the field of breeding red cattleyas. To my knowledge there is no recognized person claiming the distinction of having successfully bred and flowered any consequential amount of reds. Many have tried and several have succeeded in the introduction of certain breeding lines, but no one person has consistently bred any amount of fine reds.

Need for Official Color Guide

In discussing red cattleya-types the first item to clarify is "what do we mean when we use the term 'red cattleya'?" Obviously viewpoints differ, for what one person calls red another might refer to as plum-purple. In this writer's opinion the adjective "red," when used in reference to the cattleya-type orchid, should be a true, clear red — free from any other color pigmentation. Basically this type would logically come from parents having no purple breeding tendencies. We do find a few true reds that show themselves among the red-purple hybrids, but one can usually detect strong evidence of purple gene packages within the flower.

This leads to a growing need for a color graduated scale, keyed, not to paint or fabrics, but to the colors we experience in orchid flowers. While it is true we now have a color chart available, it is not primarily keyed to the unique range of colors found in our flowers. Without doubt this is a most difficult task but a much needed implement to our trade.

Perhaps this should fall under the auspices of the A.O.S. judging system which might delegate a committee to work in conjunction with a color printing firm to establish a range of colors that would adequately embrace the wide scope of colors found in Orchids. To cover the expense the charts could then be offered to the trade and hobbyists for sale, thereby establishing an authoritative reference to colors that at present are almost impossible to describe.

We must still acknowledge that because of the complexities of the human eye each person may see "red" a bit differently than the next, but the reference chart would be of tremendous help in standardizing descriptions of flowers. Commercial orchidists could still use all the glowing adjectives they wish in their descriptions but the official color guide would be referred to as the final authority to "pin down" the correct shade for all to recognize.

Basic Species Used in Red Breeding

When speaking in terms of breeding for red cattleya types we must search out the few species having no obvious purple gene packages that can be transferred to future progeny thereby diluting the sought after true-red flower.

It has been my observation that the following have no obvious purple breeding tendencies: *Sophronitis grandiflora, Cattleya aurantiaca, C. leopoldii* and *C. guttata, Laelia milleri, L. flava, L. cinnabarina,* and *L. harpophylla.* We possibly should add *Laelia tenebrosa* to this select group, for this brightly colored species lends itself to a number of red-toned hybrids. One that immediately comes to mind is *SL.* Gratrixiae *(L. tenebrosa* x *S. grandiflora).* Using *L. tenebrosa* with *C. leopoldii* gives us *LC.* Issy with many intriguing deep chocolate shades that might possibly be of great use in eventual red breeding programs.

An outstanding example of red breeding is *SC.* Cleopatra *(C. leopoldii* x *S. grandiflora).* We have used some of the fine forms of this "fire-engine" red hybrid and predict it will become as basic as sophronitis itself in future breeding programs. Only last month we flowered our first seedling from the cross *SC.* Cleopatra, 'Dragons Blood' x *SC.* Doris, 'Pamela' AM/AOS. Blooming in a three-inch pot, this delightful 3¾" flower was an exceptionally well-formed tangerine-orange with a scarlet overlay graced by a full, deep purple lip. Although not a true red, we were delighted to find a complete lack of purple pigmentation in the tepals. We have also seen hybrids of *SC.* Cleopatra x *LC.* Bright Night (*C.* Pittiana x *L.* Cinnabrosa) and *SC.* Cleopatra x *LC.* Oro Mesa (*LC.* Mem. Albert Heinecke x *LC.* Calizona) in shades of brilliant clear red to copper-red.

While it is true that sophronitis expresses its poor features of small flower size and growth habits in some of its progeny, and these features present a barrier in hybridizing large well-formed flowers, it is regaining its popularity as the obvious starting point and major influence in the breeding of reds.

Another cattleya species currently popular is *C. aurantiaca.* When combined with the tetraploid *SLC.* Anzac, 'Orchidhurst' FCC/RHS, the resulting *SLC.* Jewel Box has given us a substantial quantity of outstanding red through orange shades.

The laelias are extremely popular in America, for we are in the midst of a trend towards miniaturization and the laelia species and their hybrids lend themselves well because of their smaller flowers. A hybrid that seems to capture everyone's heart is *SL.* Jinn *(S. grandiflora* x *L. milleri).* Dwarf growing, it produces small scarlet flowers 1½ to 2" in size on adult plants in 2" and 3" pots. It looks promising as a parent of the future, possibly taking the place of *SL.* Psyche *(S. grandiflora* x *L. cinnabarina).*

Laelia flava and *L. harpophylla* would be the last to be mentioned as breeders of reds and are included only because when combined with one or more of the aforementioned species they give rise to a fair percentage of red progeny.

Blends of Red Coloration

We now come to a more complex study of hybrids referred to as "reds," but are in fact blends of the red species with yellow and/or purple hybrids. They fall generally into the following blendings of color: purple with red overtones, yellow or orange with red overtones, red with bronze or mahogany overtones and art shades of red suffusion. Most frequently involved are purple hybrids with a *C. dowiana* background.

The vast majority of awarded so-called "reds" are far removed from their sophronitis ancestry for orchid judges and hobbyists have fallen into the habit of looking for the larger, more shapely blooms resulting from the hybridization of sophronitis with deeply colored purples having a strong *C. dowiana* background. *C. dowiana* seemingly acts as a recessive when crossed with purple during the first generation of hybrids, but strongly exerts itself in subsequent hybrids when doubled with other *C. dowiana* bred deep purples. In certain hybrid combinations it tends to intensify the purple coloring giving rise to extremely deep shades of purple and purple-red.

A good example would be the well known *SLC.* Anzac, 'Orchidhurst' FCC/RHS, a sophronitis derived hybrid with an intensified red-purple coloring brought about by the use of *C. dowiana* on both sides of the Anzac parentage. *Sophrolaeliocattleyas* such as Lindores, Brandywine, Meuzac, Paprika, Estella Jewel, and Vallezac are among the most popular awarded "reds." Many of these vibrant, sparkling, ruby-reds are now being used as parent plants themselves.

Much discussion is generated among hybridizers when hybrids such as *LC.* Marie Ozella (*LC.* Lee Langford x *C.* Nigrella) are referred to as "reds." Certainly this popular, singularly distinctive hybrid deserves much praise but somehow I cannot bring myself to the point of calling them "red" cattleyas. Having seen the majority of the varietal named clones I find them very difficult to describe. My attempts would include Inky-maroon, rust red, ruby purple, mandarin orange, copper bronze, and yellow. Again, this may all be in the eye of the viewer. When in doubt I would certainly choose to trust my eyes rather than to refer to color photography, for no matter how experienced the photographer may be it is not always possible to capture the true color on film. Certainly I do not condemn the *LC.* Lee Langford approach to breeding for it can, and has, produced tremendously interesting hybrids. Selected clones of *LC.* Pirate King (*LC.* Lee Langford, 'Copper Queen' x *LC.* Quadroon, 'Red Velvet') are outstanding intense shades of red-purples that defy description.

Direct Sophronitis Hybrid of Promise

A line of breeding, yet unproven but of delightful promise, is the use of *SLC.* Falcon, 'Westonbirt' FCC/RHS, AOS, ODC as a parent. Personally I have seen only one hybrid from *SLC.* Falcon. This is *SLC.* Falcon, 'Westonbirt' x *C. intermedia alba.* I am told that out of several hundred seedlings only one was found that had good form and color. We have it under cultivation and would describe it as a somewhat smaller *SLC.* Anzac. However, we should not expect many reds from this type of cross. I believe *SLC.* Falcon (preferably the 'Westonbirt' variety as it constantly blooms with better form than 'Alexanderi'), when hybridized with any one of the several species mentioned as "red breeders," can produce some truly outstanding reds.

Presently we are waiting for buds to appear in a sheath carried on a seedling of *SLC.* Falcon, 'Westonbirt' x *SLC.* Anzac, 'Orchidhurst.' We are aware of at least six other hybrids in all stages of seedling growth made with either the 'Alexanderi' or 'Westonbirt' clones. Contrary to popular belief we have found the seedlings to be strong growers, just as we found mericlones of 'Westonbirt' to be amazingly robust. When I hear *SLC.* Falcon referred to as a poor sophronitis type grower I cannot help but remember that within a span of three years we grew a four-bulb plant of 'Westonbirt' into a 22-bulb plant that ultimately received its most recent FCC award.

Conclusion

It has not been my wish to determine what shade or tone of "red" cattleya you should accept as the ultimate of this popular color, but only to emphasize the need of a recognized official color guide. It is only through the practical use of such a guide that each hobbyist or hybridizer can determine the actual true shade of "red" referred to within the profound descriptions listed in the trade catalogs and award listings.

A few rules to bear in mind when breeding for "reds" might be of help at this point. Remember — yellow or red in laelia species is dominant, so is size. *C. aurantiaca* also dominates in color and size. *S. grandiflora* genes for true red color dominate and when used with like types give reds free from purple overtones. When used with brightly colored purples, it tends to work with *C. dowiana* enhancing the purple with red overtones. There appears to be much sterility involved when used with other species and primary hybrids. Tetraploids are difficult to find among reds.

The door to breeding "reds" is open wide for those who want to meet the challenge.

Look at it this way — the breeding of red seedlings can be compared to a sight-seeing tour — many interesting points highlighted by a few great landmarks. Mericlone divisions guarantee the greatest landmarks of the Orchid World.

Meristem propagation makes the production of seedlings even more attractive and it is only through *hybridization* that we can produce the new, even more exciting reds that can eventually be meristemmed and made available to all!

2500 Fire Mountain Drive
Oceanside, California

SC. DORIS, 'PAMELA' AM/AOS-ODC
(*C. dowiana* x *S. grandiflora*)

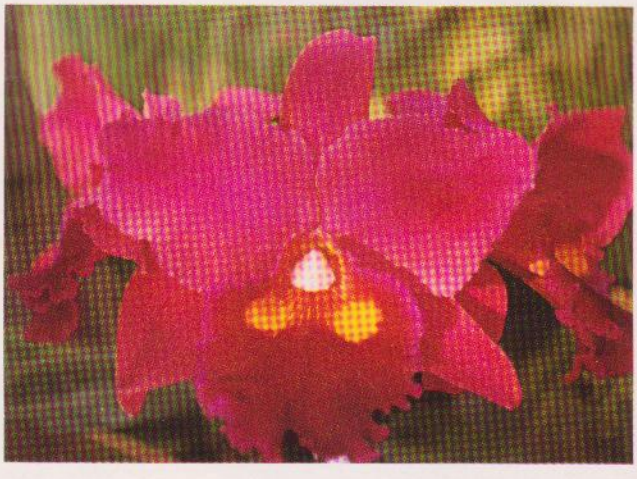
This superb flaming-orange *Sophrocattleya* opens a brilliant Indian red maturing to orange. The 3"-3½" blooms are borne two per stem several times per year on strongly growing mature plants. Note the lip is no longer sophronitis-type but leans favorably toward the *C. dowiana*. A step in the right direction towards a standard-sized, well formed red to orange. Breedable — but reluctant!

SLC. FALCON, 'WESTONBIRT'
FCC/RHS, AOS, ODC
(*LC.* Aureole x *S. grandiflora*)

A glowing combination of the species *Sophronitis, Cattleya dowiana* and *C. bicolor,* with *Laelia tenebrosa.* This scarlet-red has, for many years, been the crown-jewel of the cattleya world because of its intense pure coloring. Of the two famous *SLC.* Falcons this variety consistently blooms 3-4 times per year in Southern California with better form than *variety* 'Alexanderi.' Viable seed has been harvested from 'Westonbirt' as well as 'Alexanderi' and we look forward to their progeny with great hope.

SLC. TROPIC FLARE, 'MAGIC FIRE' AM/ODC
(*LC.* Miami x *SLC.* Ramona)

A most unusual flower in the "red" tones because of its large size and its exceptional form. Although the cross did not produce a high percentage of quality, this clone stands among the great *Sophrolaeliocattleya* hybrids of our times. Again we find a substantial amount of *C. dowiana,* with a strong *C. warscewiczii* influence still expressing itself in the yellow "eyes" of the lip. *Sophronitis* appears only once in the background.



LC. PIRATE KING 'CRIMSON TRIUMPH'
(*Lc.* Lee Langford 'Copper Queen,'
HCC/ODC x *Lc.* Quadroon 'Red Velvet,' AM/AOS)

Pirate King illustrates one of the most successful methods of obtaining the dark red purple laeliocattleyas which are so much sought after. The Quadroon parent is a dark purple bred from *Lc.* Susan x *C.* Nigritian. The *Lc.* Lee Langford 'Copper Queen' is illustrated on the cover of this issue and is bred from *Lc.* S. J. Bracey by Calizona. The yellow by purple combination generally gives a high percentage of purples with warm flame tones.

SOPHRONITIS COCCINEA
'REDCAP'

'Redcap' is a fine form of this ever popular species from Brazil in South America. This species has been used literally scores of times in the breeding of the Sophro reds.