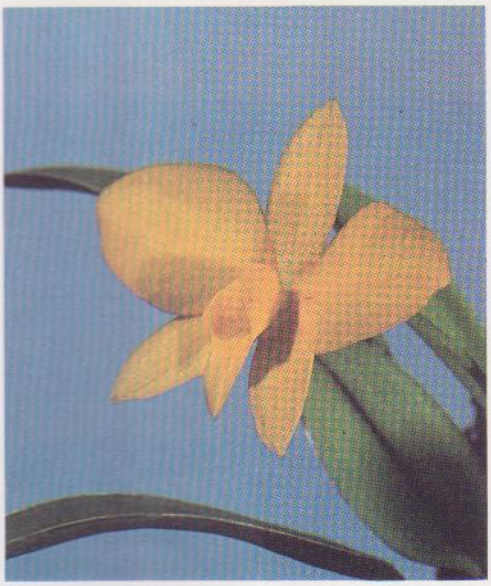
Cattleya Small Talk

FRANK FORDYCE

A NEW WAVE of interest in the *Cattleya* alliance is being stimulated by small-growing, miniature-flowered orchids whose blooms closely resemble the familiar form of the standard cattleya. Recently a great deal of attention has been focused upon these diminutive forms. Growers began to observe one of the most attractive features of the ever popular *Sophrolaeliocattleya* group: the compact plant size, enabling the plants to be handsome without being overwhelming. Providing the flowers are bright and cherry-red, and the plants compact, orchidists throughout the world readily accept even average-quality blooms because of their miniature character.



Photography: J.M. Stewart

Sophronitis coccinea 'Amarilla'

Some years ago, when I was serving as the orchid sales manager for the Rod McLellan Company of San Francisco, California, I found that position to be an excellent observation point of our entire industry. As hobbyists and commercial growers alike visited regularly, I was able to discuss the likes and dislikes of orchidists throughout the world, and I found that the small-growing, brilliantly colored "Cattleya-type" plants were universally popular. To test the potential of a miniature-*Cattleya* commercial market, two clones of the popular *Sophrolaelia* Psyche (*Laelia cinnabarina* × *Sophronitis coccinea*) and a small quantity of the rare, reddish-chocolate-colored *Cattleya* species, *C. schilleriana* 'Sanderiana', were mericloned and offered for sale as near blooming-size plants. So positive was the response that we launched into a program of miniature hybridization utilizing such recognized miniatures as *Cattleya luteola*, *C. aclandiae*, *Laelia milleri*, *Sophrocattleya* Doris, *Sophrolaeliocattleya* Madge Fordyce, *Sophrolaelia* Gratrixiae and others.

Orchids, as with miniatures of all types, are among the most popular collectibles throughout the world. From the miniaturization of art objects, portraits, ships, automobiles, to many breeds of animals and varieties of plants, the list is endless.

Grower: Fordyce Orchids *Photography: Madge Fordyce*

Cattleya schilleriana 'Sanderiana'

Because miniatures are petite, diminutive replicas of larger forms, they apparently fill a sentimental spot in many hearts. I find miniature cattleyas to be orchids for which I feel an affection and admiration beyond my normal appreciation of beauty.

"But", my practical nature questions, "beyond their obvious intrinsic artistic appeal, are there practical or economical reasons for miniaturization?" The more I studied this factor, the more convinced I became that there could be no better time to emphasize the value of these petite orchids than during our expanding energy shortages. Such orchids can serve a double purpose. Since hobbyists and commercial growers alike are spending ever increasing amounts in heating of greenhouses, purchase of plastic pots and growing materials, any means of curtailing these costly items would be welcomed by all. A fact of increasing importance to all growers searching for energy savings is the ability of many miniatures to grow at lower night and day temperatures. While most standard cattleyas require a 60° to 80°F tem-

Cattleya luteola 'Nathalie'

Grower: Fordyce Orchids *Photography: Madge Fordyce*

perature range, many of the compact, miniature *Sophronitis* hybrids, and some *Laelia* and *Epidendrum* hybrids, may be grown successfully at temperatures of 50° to 75°F, if the plants are well established. This lower temperature range allows for substantial fuel savings while the compactness of the individual plants permits many more to be grown in a given space. Additionally, more plant units may be grown utilizing the same quantity of potting material it takes for standard-size plants.

Many of the miniatures bloom at least twice per year, a feature dear to the heart of the hobbyist and "money in the bank" for the commercial, pot-plant grower. I mention orchid pot-plant growing for it is rapidly emerging as one of the most popular aspects of the commercial trade world-wide. The sale of orchids, in bloom, as pot plants is appearing not only in the florist and nursery trade, but in all types of market places. The public stigma about orchids being difficult to grow is disappearing. It is my firm conviction that miniature orchids will emerge among the most popular of all orchid pot-plant introductions due to petite plant size, vivid color, ease-of-bloom, and the exceptionally long-lasting qualities of the flowers.

We can enjoy the full spectrum of color in the miniature *Cattleya* alliance: from traditional royal purple, to a vast array of brilliant reds, yellows and vibrant oranges, to lush greens, a few splashes and polka-dots, a semi-alba here and there, bold browns, and an occasional chaste white. The further I delve into the small-flowered types the more amazed I become at their potential. Even those whose only thoughts of *Cattleya*-type blooms are the massive brassolaeliocattleyas welcome the appeal of the floriferous, mini-flowered plant with its perky blooms of bright color.

You may have noted the term "Cattleya-type". I believe we have just begun to discover the fascinating world of multigeneric hybrids that interbreed with cattleyas. Some are already familiar; many are literally unheard of in general distribution. As in any new field of endeavor, it's a challenge to search out all genera that will combine to produce "Cattleya-type" flowers on compact plants. Startling results are appearing in such hybrid combinations as:

Hawkinsara — (*Broughtonia* × *Cattleya* × *Laelia* × *Sophronitis*)
Brownara — (*Broughtonia* × *Cattleya* × *Diacrium*)
Stanfieldara — (*Epidendrum* × *Laelia* × *Sophronitis*)
Rothara — (*Brassavola* × *Cattleya* × *Epidendrum* × *Laelia* × *Sophronitis*)
Mizutaara — (*Schomburgkia* × *Cattleya* × *Diacrium*)
Bishopara — (*Broughtonia* × *Cattleya* × *Sophronitis*)
Lyonara — (*Schomburgkia* × *Cattleya* × *Laelia*)
Severinara — (*Diacrium* × *Laelia* × *Sophronitis*)
Epicatonia — (*Epidendrum* × *Broughtonia* × *Cattleya*)

There are scores more in an almost endless and surprising array.

With all this talk about miniature cattleyas one question arises: "What qualifies as a miniature?" Is it foliage size, overall plant height, bloom size, or a combination of all? Who sets the standard? At the time of this writing no authorized guide has been published by a recognized judging system. Similar to miniature cymbidiums, the miniature *Cattleya*-types must earn their place in the judging room by being sufficiently and consistently different than their cousins, the larger-flowered, standard cattleyas. A constant, charming uniqueness will develop a pattern in which specific guidelines for evaluation may be determined and standards set. As with all changes, it takes time to make the necessary observations. I look forward to the day that miniature cattleyas will merit their own category in the judging system.

In the May 1982 issue of the A.O.S. Bulletin Shell Kanzer outlined his criteria for qualifications of miniature cattleyas in "Miniature Cattleyas — An Adventure in Breeding". Although we differ on a few points, I agree generally with the

majority of his requirements and welcome him to our "small world". Observing miniatures for many years, I find they fall basically into three distinct groups, each defined by plant size. Measurements quoted are from rhizome to overall plant height.

Micro-mini's

These are plants of approximately three to four inches in height. They usually bloom at maturity in two- to three-inch pots. Many are species or primary hybrids of the *Sophronitis* and rupicolous *Laelia* group.

True Miniatures

Ranging in size from approximately five to ten inches in height, these orchids bloom in three- to five-inch pots. In this group are such species as *Cattleya luteola, Laelia pumila, L. lundii, L. sincorana* and *L. milleri*. Such popular hybrids have resulted as *Sophrolaelia* Psyche, *Sl.* Gratrixiae, *Sophrolaeliocattleya* Ginny Champion, *Slc.* Yellow Doll, *Sophrocattleya* Doris, *Cattleytonia* Why Not, and scores of others!

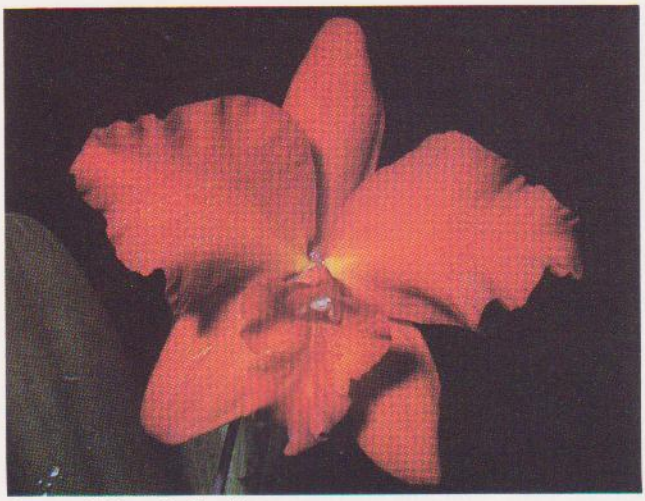
The majority of the popular, "red" sophrolaeliocattleyas fall into yet another group that could be referred to as the:

Maxi-mini's or Compacts

While many of these orchids could easily bloom for the first time in three-inch pots with plant heights of only six to eight inches, they mature into full-grown, ten- to fourteen-inch-tall plants. Such plants as *Laelia jongheana, L. rupestris, Cattleya forbesii, Diacrium bicornutum,* many encyclias, *Sophrolaeliocattleya* Madge Fordyce, *Slc.* Hazel Boyd, *Slc.* Falcon, *Slc.* Jewel Box, and *Slc.* California Apricot are among this group. The vast majority of the standard *Cattleya* alliance are bred from *Cattleya guttata, C. hardyana, C. trianae, C. warscewiczii, Laelia tenebrosa, L. cinnabarina, L. harpophylla, L. purpurata,* and their hybrids. The majority of these orchids measure over fourteen inches in height.

In the fervor to produce a hybrid qualifying as a miniature, the amateur hybridizer is often tempted to use any small-growing *Cattleya*-type at hand. Unfortunately "pretty × pretty" does not usually equal "gorgeous"! A seasoned, professional hybridizer will only make value judgments and parent-choices based upon observations of hundreds of species and hybrids he has seen or documented with the aid of literature or personal experience.

A quick review of orchid advertisements the past six months in any orchid periodical may rapidly convince you that far too many hybrids are being offered for sale that are not "progressive" to any degree. Even the practical hybridizer may lose sight of his responsibility to improve the strain as he becomes caught up in the everyday pressures of meeting escalating costs of growing and merchandising his plants. Almost unknowingly, you can fall into the trap of grinding out hybrids to meet monetary deadlines by selecting parents which produce quantities of seedlings which are however simply hybrids of great similarity to those already on the market. A good check against the natural tendency is frequent discussion with fellow hybridizers about parent lines, new directions of breeding, failures of germination, etc. This sharing of general plant knowledge aids in creating an ability to produce both new and "improved" hybrids. Search out valid information about all parents and progeny before setting goals of hybridization. For example, in breeding for splashed-petal hybrids, first discover which species influence the transfer of the splashes. Ascertain their positive and negative influences, i.e., percent of splash transfer in hybrids of like breeding, size of flowers of progeny, substance, stem, color



Grower: William E. Farrell

Sophrocattleya Doris 'Pamela', AM/AOS (80 pts)
(Sophronitis coccinea × Cattleya dowiana)

dominance and plant vigor. Investigate the proclivity of some species and hybrid clones to produce blooms that fail to open fully, whose petals sweep forward over the column. Once you have researched the species, gather as much information as possible on their hybrid progeny. Never be so satisfied with your own knowledge that you cannot learn from others. This was brought home to me in a dramatic fashion recently.

A commercial buyer wished to place an order for several thousands each of our new miniature and splashed-petal hybrids on a yearly contract basis. I was elated about his confidence in our stock and the magnitude of his possible purchase. In order to balance the quantity of colors and types of hybrids, I reviewed the inventory available of each of our crosses. That was the learning experience. I already knew that a high percentage of the hybrid combinations of miniatures have produced either no seed or a small quantity, but I was not prepared for the actual fact

Sophrolaelia Gratrixiae 'Crothers', HCC/AOS (76 pts)
(Sophronitis coccinea × Laelia tenebrosa)

Grower: H.W. Crothers

that the majority of our own crosses had only produced from 50 to 1,000 seedlings. In miniatures it seems to be an inescapable fact that the more complex the hybrid, the more difficult it is to breed with.

Three basic categories seem to be evolving in miniatures: the "cute", the exhibition type with a fair percentage of awardable clones, and the commercial, pot-plant types. My interpretation of "cute" would encompass such delights as *Cattleya luteola, Sophronitis cernua, Laelia rupestris, Sophronitella violacea, Leptotes bicolor,* and might even include the unique, spotted and barred hybrids from *Cattleya aclandiae.* In many instances these hybrids are much easier to breed and are therefore more plentiful in the marketplace. Being "cute" does not exclude them from the awards committee, but, in most cases, awards are given to this type only when they are displayed as speciman plants bearing many flowers.

Photography: courtesy of Rod McLellan Co.

Sophrolaelia Psyche 'Prolific', AM/AOS
(*Sophronitis coccinea* × *Laelia cinnabarina*)

The exhibition type could be a species such as the white *Cattleya walkeriana* or a hybrid from (*Sophronitis coccinea* × *Sophrolaeliocattleya* Helen Veliz). Or it might well be (*Slc.* Hazel Boyd × *Slc.* Yellow Doll).

As with miniature cymbidiums, the micro-flowered species and hybrids will find their way to the AWARDS QUARTERLY far less often than will the species and hybrids that produce brightly colored blooms three to four inches in size.

I have mentioned the commercial, orchid pot-plant market because this recent development in our trade has extended the orchid business into areas never before developed. Much of the credit for the establishment of this segment of our trade must go to Mr. Rod McLellan, who believed that orchids should be made available to everyone at popular prices. This horticultural pioneer was among the first to mechanize much of the production of gardenias and roses. It was Rod McLellan who also visualized orchid plants merchandized in supermarkets and who began the orchid pot-plant trade for the public before his untimely passing. While a few may refer to orchid pot-plant marketing as prostitution of the orchid industry, the majority view it as an extension of the trade. It allows a welcome movement from grower to public of healthy hybrids that cannot find a place in the cut-flower or

hobbyist trade. The pot-plant industry actually began to expand with the advent of tissue culture, for specifically selected clones could then be mericloned in enough quantity to meet predetermined sales.

The miniature, brightly-colored *Cattleya* types will be a welcome addition to this trade. Due to their size, transportation is no problem. A variety of colors will be available, plants are easily picked up and carried by customers, and many varieties will last in bloom for weeks, or even months! They are ready-made for growing under lights and can be adapted to home growing in many instances.

Grower: Fordyce Orchids
Photography: Madge Fordyce

ABOVE,
(*Sophrolaelia* Psyche × *Laelia harpophylla*)
'Tiny Tart'

BELOW,
Sophrolaeliocattleya Yellow Doll 'Mini-Sun', HCC/AOS (77 pts)
(*Sophrolaelia* Psyche × *Cattleya luteola*)

Grower: Fordyce Orchids
Photography: Beauford B. Fisher

As I reflect on the impact mericlones have had upon our trade and the role Fordyce Orchids played in their introduction into the United States from Vacherot and Lecoufle of France, I cannot help but think that there are more benefits than problems. Mericlones have given commercial grower and hobbyist alike the ability to choose selected rare colors and forms at reduced prices, making available specific clones that had previously never been sold to the general public. To some, mericlones have removed much of the mystique and prestige of owning a "one of a kind" orchid. Where your own prize "green with pink lip" cattleya once commanded every eye, you may now find four other identical plants on the display table. Like all things, mericlones have their good and bad points, but they are undoubtedly an excellent means of gathering a fine collection for breeding or exhibition purposes.

While mericloning is certainly a helpful and welcome part of the world of growing orchids, it will never replace the joy and satisfaction gained from hybridizing as seedlings of unique, individual beauty bloom. If an accurate poll could be taken of orchid hybridizers, I firmly believe that the greatest number of hybridizers would far rather produce a high average of quality hybrids and receive the recognition from their peers for that achievement than to receive a substantial monetary award solely from mechanical production of mericlones.

Grower: Fordyce Orchids *Photography: Madge Fordyce*

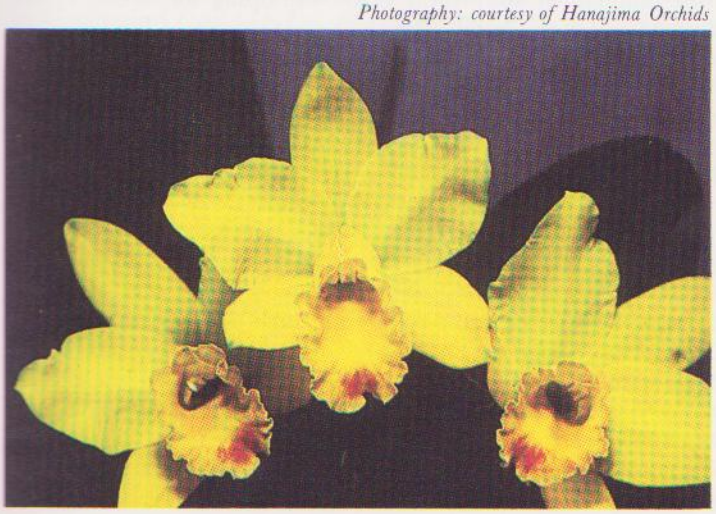
Sophrolaeliocattleya Ginny Champion 'Mini-Bouquet', HCC/AOS
(*Sophrolaelia* Psyche × *Cattleya* Baby Kay)

How many times, as you read a hybridizer's presentation of a new cross, have you asked, "I wonder what he is trying to achieve? Why is he using those specific parents?" Far too often your questions go unanswered as predictions and reasons are relegated to one line of advertising. However, through such articles as that by Shell Kanzer previously cited and this article, you may get a sense of what certain species and hybrids do when bred together. I won't repeat the main features outlined in Mr. Kanzer's article, but I will, hopefully, add information to it for your mental "catalog".

Sophronitis coccinea has had a major influence in the breeding of miniatures. I must point out however that, although it is the prime parent of the vast majority of current miniatures and reds, because of its cool-growing requirements few areas in the United States are cool enough to grow and bloom these diminutive plants well enough to produce blooms to hybridize. *Sander's Lists of Orchid Hybrids* lists only 37

Brassolaeliocattleya Kitty Crocker 'Yellow Doll'
(*Brassolaeliocattleya* Fortune × *Cattleya luteola*)

Photography: courtesy of Hanajima Orchids



hybrids made with *Sophronitis coccinea* as a pod parent from 1971 to 1980! Growers are more frequently using *Sophronitis brevipedunculata, S. cernua* and *S. rosea* (*S. wittigiana*) — the warmer, drier growing sophronitis — as parents. Also remember that pods are more often held on the *Sophronitis* parent than on a larger-bloom type simply because the small pollen tubes of the sophronitis apparently have difficulty traversing the long ovary of the larger bloom in order to fertilize the ovule.

Sophrolaelia Psyche (*L. cinnabarina* × *S. coccinea*) is one of the most utilized parent plants in the true miniature group. Ease of growth, frequency of bloom, dwarfness of plant habit and brilliance of color make it popular. But *Sophrolaelia* Psyche has a weakness: a tendency to allow slight deformities in its progeny due to the *Laelia cinnabarina* parent. You must carefully select the parents to be used with *Sl.* Psyche in order to minimize this problem. Be careful when using additional *L. cinnabarina*-based parent stock. (Similarly, if you are using *Cattleya dowiana*-based parents, do not "load up" on *C. dowiana*. Too much *Cattleya dowiana* can, at times, produce deformities as well.) Generally, *Sophrolaelia* Psyche is a superb parent. When used with polyploids such as *Slc.* Anzac-hybrids, remember that the true dwarfness of *Sl.* Psyche will be lost in the ten- to twelve-inch-tall progeny that will be primarily cerise purples, e.g., *Slc.* Redzac (*Slc.* Anzac × *Sl.* Psyche).

Among my favorite parents is *Sophrolaeliocattleya* Yellow Doll 'Mini-Sun', HCC/AOS (*C. luteola* × *Sl.* Psyche), growing only eight inches tall at full maturity and producing bright yellow flowers of award form in frequent profusion. Another favorite species parent is *Cattleya luteola*. This species apparently grows much better on bark slabs than in pots. Search for clones that have clear coloring and whose petals open flat. Our clones grow to a height of five to eight inches. Such hybrids as *Laeliocattleya* Cuiseag (*C. luteola* × *Lc.* Ann Follis) and *Brassolaeliocattleya* Kitty Crocker (*Blc.* Fortune × *C. luteola*) are examples. Hybrids involving the sophrolaeliocattleyas should retain the small-growing features yet allow sizeable blooms in profusion. Mature plants of *Cattleya luteola* produce up to nine blooms per sturdy stem held above the foliage.

Cattleya aclandiae grows best on wooden slabs, producing startling, bold, spotted and barred blooms. My first cross with *C. aclandiae* was a result of complete frustration. I had tried unsuccessfully to set pods on *Sophrolaeliocattleya* Madge Fordyce and I finally decided to cross the two because most *C. aclandiae* clones breed easily. This is exactly the type of cross I have warned against making, the one that is out of frustration, spur-of-the-moment or simply the result of hoping for freckle-faced, redheaded kids — like the rest of my family. Much to my surprise and delight, the majority of the cross produced flowers completely devoid of any spotting, of fair to excellent form, and which were extremely long lasting. That cross is now registered as *Sophrolaeliocattleya* Dixie Jewels. The colors are rosy red through deep blood-red with a waxy sheen. I have since learned that *Cattleya aclandiae*, when crossed with spotted types, produces all spotted and barred progeny. When *Cattleya aclandiae* is bred with non-spotted parents, the first-generation progeny carry no spots at all. Hybrids from *C. aclandiae* that are look alikes to the species but that grow and bloom much more easily are *Cattleya* Landate (*aclandiae* × *guttata*) and *C.* Brabantiae (*aclandiae* × *loddigesii*).

Among the most unique species I am using is the eight-inch-tall, easy to grow and bloom *Cattleya schilleriana* 'Sanderiana'. The out-of-the-ordinary wavy petals are waxy chocolate in color with deeper underlying spotting. The lip is intense purple and white. I do not know if this specific variety has been used by others so this may purely be a personal experiment.

Cattleya walkeriana is both a joy and a problem. I find it difficult and slow to grow, but its hybrids are charming. *Cattleya* Angelwalker (Little Angel × *walkeriana*) has

produced scores of closed-form hybrids and possibly may be a key plant for future generations of miniature whites. More white *Cattleya walkeriana* clones are being bred with than the purple or semi-alba varieties.

The rupicolous Brazilian laelias are rapidly acquiring the limelight, and I cannot imagine why we haven't used them more frequently in the past. Much has been done with the red and orange, dwarf-growing, long-stemmed *Laelia milleri* and *L. flava* with known, favorable results. *Laelia briegeri* hybrids are just beginning to bloom and are, in my opinion, an improvement over those from *Laelia flava*. *Laelia briegeri* is dominant in flower size and form in all the hybrids seen to date. The finest hybrid has been *Sophrolaeliocattleya* Orglade (*L. briegeri* × *Slc.* Hazel Boyd).

Laelia pumila has superb form and passes its dwarf-growing nature to non-complex hybrids. It is somewhat shy in its blooming habits both in frequency and quantity of blooms per stem. It does impart form to its progeny. *Laelia pumila* 'Black Diamond' is the finest clone I have seen.

Laelia sincorana appears to be among the top dwarf laelias currently used due to its compact growing nature and excellent tall spikes bearing full-formed, relatively large blooms.

Many of the other rupicolous laelias such as *Laelia itambana, L. esalqueana, L. endsfeldzii, L. ostermeyeri* and *L. liliputiana* are being used but results have not yet been reported in any quantity. *Laelia rupestris* has been used frequently, and all progeny I have seen look very much like *Laelia rupestris* in bloom size, form and color. The finest was *Sophrolaelia* Cheerio (*L. rupestris* × *S. cernua*), a delightful, bright, true pink miniature. Flowering stems are strong when *Laelia rupestris* is used.

Do not overlook the encyclias, the bulb-type epidendrums. Much work has already been done in the southern United States with many varieties, including the popular, dwarf-growing *Encyclia tampensis*. The results are very promising, producing two- and a half to three-inch blooms when hybridized with standard cattleyas, especially if alba or semi-alba forms are used. Everyone likes the green with white lip *Encyclia mariae*, and considerable work has already been done hybridizing that species with green cattleyas in order to retain the green coloring. Some smallness is lost but results are still very promising. Look for clear greens with ruffled white lips. *Encyclia radiata* is also drawing attention when crossed with standard cattleyas. *Epidendrum conopseum* is a dwarf-growing, tiny Florida species that has been successfully hybridized with standard cattleyas and, hopefully, will eventually produce cold-resistant *Cattleya* types. *Epicattleya* Brian David (*E. conopseum* × *C.* Bow Bells) is a superb hybrid.

Broughtonia sanguinea and its hybrids produce the warm-growing miniature types. Most hybrid populations to date have been made with cattleyas to produce *Cattleytonia*, with the *Cattleya* parent bearing the seed pod. It is difficult to hold pods on most *Broughtonia sanguinea* clones. The *Broughtonia* plant compactness is diluted when crossed with cattleyas if extreme care is not taken. A good example of retaining small stature is found in *Cattleytonia* Why Not (*C. aurantiaca* × *Bro. sanguinea*). The form and stem of *Broughtonia sanguinea* is the most notable feature passed to its progeny. A hybrid of considerable intrigue to me is *Cattleytonia* Breathless (*C. intermedia* var. *aquinii* × *Bro. sanguinea*), a delightful, full-formed, splashed-petal cross. There has recently been a flurry of excitement as broughtonias are bred with other genera to produce completely new genera. Among them are the genus ***Otaara*** (*Broughtonia* × *Cattleya* × *Brassavola* × *Laelia*), ***Jamesara*** (*Broughtonia* × *Brassavola* × *Cattleya*), ***Hawkinsara*** (*Broughtonia* × *Laelia* × *Cattleya* × *Sophronitis*) and ***Brownara*** (*Broughtonia* × *Cattleya* × *Diacrium*). To the delight of most, the *Broughtonia* multigeneric hybrids are blooming on very small plants, many with full-formed,

delightful blooms held on tall stems. Another feature beginning to emerge in the *Broughtonia* hybrid field is the variety of color possibilities available. While most growers think of broughtonias as pleasant medium purples through rosy shades, there are pure alba forms that are being selfed for segregation, semi-albas and even yellows. We have much to learn in this new hybridizing direction — but that is what makes it exciting!

Cattleya intermedia var. *aquinii* leads me to my favorite clone, a selfing of the cultivar 'Sao Paulo' that opens full and flat with heavy splashes of purple on the petals. The plant grows approximately ten inches tall. Many of the "so-called" *C. intermedia* var. *aquinii* clones in existence are actually suspected to be hybrids. Looking at pseudobulb stature, I have to believe the rumor is true. "Splash-petaling" is no exact science, but it has earned its place in miniature history already. If you have seen the illustration of the best miniature orchid of the 10th World Orchid Conference — *Sophrocattleya* Batemanniana (*S. coccinea* × *C. intermedia* var. *aquinii*) — in the September 1982 A.O.S. BULLETIN, you may be convinced. The entire pot and plant could not have been over four inches tall. Superb! And carried all the way from Japan to South Africa in bloom! We have high hopes as we breed with this petite hybrid.

Sophrolaelia Gratrixiae (*S. coccinea* × *L. tenebrosa*) is another superb parent with a growing list of successful hybrids to its credit. Apparently flexible in its growing environment, the plant stands no taller than six inches and produces brilliant copper flowers three and one-half to four inches in size, at frequent times during the year. It breeds successfully with reds to intensify color, e.g., *Sophrolaeliocattleya* Solar Fire (*Sl.* Gratrixiae × *Slc.* Madge Fordyce).

Sophrocattleya Cleopatra (*C. guttata* × *S. coccinea*) has brilliant, deep blood-red blooms borne four to six per stem. Although open in form, when bred with other *Sophronitis* hybrids to produce bright cerise to red hybrids, good form results. Even when it is bred with polyploids, resulting progeny stand no taller than twelve inches high.

Among our finest breeders is *Sophrocattleya* Doris 'Pamela', AM/AOS (*C. dowiana* × *S. coccinea*), a simple hybrid producing startling, four-inch, red-orange blooms two to three times per year when grown on a vigorous plant. Because of its simplicity, I used the clone as I would *S. coccinea* to produce *Sophrolaeliocattleya* Madge Fordyce (*Sc.* Doris × *Slc.* Jewel Box). *Sophrocattleya* Doris 'Pamela', AM/AOS is highly successful as long as it is not combined with the dominance of *Slc.* Anzac or its hybrids. Then it bows to the purple genes and produces cerise overtones to orange and red. We have now made numerous combinations with *Sophrocattleya* Doris, including *Sophrolaeliocattleya* Hazel Boyd, *Slc.* Madge Fordyce, *Slc.* Yellow Doll, *Slc.* Pixie Pearls, *Slc.* California Apricot and *Encyclia tampensis* var. *alba*.

You must have known that it would only be a matter of time before I would bring *Sophrolaeliocattleya* Madge Fordyce to your attention. Where would I be without her? Without doubt it is the hybrid that "put us on the map" and it continues to gain in popularity as its new hybrid combinations begin to bloom. We have used ten to twelve clones in hybridization and have begun to see the results of our first attempts: *Sophrolaeliocattleya* Sparkle Fire (*L.* Zip × *Slc.* Madge Fordyce), *Slc.* Sue Fordyce (*Lc.* Amber Glow × *Slc.* Madge Fordyce), *Slc.* Solar Fire (*Sl.* Gratrixiae × *Slc.* Madge Fordyce) and (*Blc.* Mellow Vista × *Slc.* Madge Fordyce). It appears that *Slc.* Madge Fordyce dominates plant size, flower form and color. The flowers are also exceptionally long-lasting. We have now combined our two finest hybrids with (*Slc.* Madge Fordyce × *Slc.* Hazel Boyd).

Seldom is a hybridizer so fortunate as to participate in the making of two top-ranking *Sophrolaeliocattleya* hybrids in one lifetime. I am indeed thankful for *Slc.*

Grower: Fordyce Orchids
Photography: Madge Fordyce

Above,
Sophrolaeliocattleya
California Delight 'Radiation'
(*Slc.* California Apricot × *Lc.* Orange Gem)

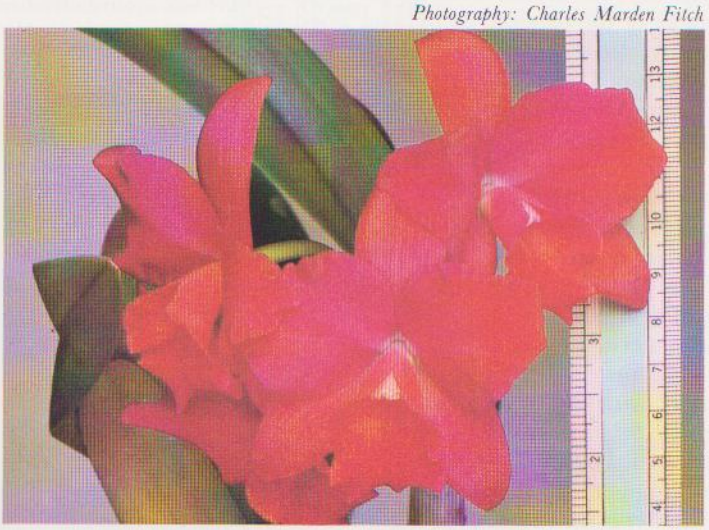
Below,
Sophrolaeliocattleya
Hazel Boyd 'House of Orange'
(California Apricot × Jewel Box)

Grower: Fordyce Orchids
Photography: Madge Fordyce

Hazel Boyd (California Apricot × Jewel Box 'Beverly', AM/AOS), our second, top winner. This cross produced the highest percentage of top-quality blooms of any *Cattleya* hybrid I can recall. I have personally seen over 100 clones bloom and I can say I was pleased with all but three of them. The parent, *Sophrolaeliocattleya* California Apricot 'Orange Circle', HCC/AOS, is the best of its cross with respect to form. Its illustrious parents are *Laeliocattleya* Pacific Sun and *Sophronitis coccinea*. *Laeliocattleya* Pacific Sun was among Rod McLellan's top breeders of mid-sized yellows.

Sophrolaeliocattleya Madge Fordyce 'Red Orb', AM/AOS
(*Slc.* Jewel Box × *Sophrocattleya* Doris)

Photography: Charles Marden Fitch



Sophrolaeliocattleya Hazel Boyd produced oranges, reds, and a few yellows, all compact growers bearing three to five blooms per stem, lasting an unbelievable time in bloom. When well grown to maturity, clones will produce up to sixteen, 3¼ to 4″ blooms per five-inch pot. We at first experienced difficulty in securing seed, but as plants matured, we have successfully harvested seed utilizing over twelve separate clones to make such crosses as *Sophrolaeliocattleya* Hazel Boyd combined with *Sophrolaeliocattleya* Yum Yum, *Slc.* Yellow Doll, *Slc.* Dixie Jewels, *Slc.* Pixie Pearls, *Slc.* California Apricot, *Laeliocattleya* Rojo, *Cattleytonia* Why Not, *Laeliocattleya* Pacific

Photography: courtesy of Rod McLellan Co.

Above,
Sophrolaeliocattleya
Dixie Jewels 'Sparkle Fire'
(*Slc.* Madge Fordyce × *Cattleya aclandiae*)

Below,
Sophrolaeliocattleya Sparkle Fire
'Amy Lou', HCC/AOS (77 pts)
(*Slc.* Madge Fordyce × *Laelia* Zip)

Grower: Bob & Amy Rath
Photography: Beauford B. Fisher

Sun, *Sophrocattleya* Doris, *Laeliocattleya* Prism Palette, *Sophrolaelia* Jinn, and an exact clonal remake of the original *Slc.* Hazel Boyd cross.

I cannot overlook the special clone of *Sophrolaeliocattleya* Jewel Box 'Beverly', AM/AOS, that helped make *Slc.* Hazel Boyd. Until recently it had not held seed pods itself, but I am pleased to report that the remake of *Slc.* Hazel Boyd utilizing the exact clones was made with the 'Beverly' cultivar as the pod parent, and seed was obtained. Since that time other pods have held successfully. The only other cross to bloom in any quantity has been *Potinara* Flameout (*Blc.* Gift × *Slc.* Jewel Box 'Beverly', AM/AOS). This too was a high-average cross producing full-formed, red to reddish-orange flowers of approximately five inches in size. New hybrids made by the late Rudolph Pabst, a hybridizer of considerable talent, who originally bloomed *Sophrolaeliocattleya* Jewel Box 'Beverly', AM/AOS, are beginning to bloom and show considerable merit. Recently we had awarded a hybrid of (*Lc.* Brilliant Orange × *Slc.* Jewel Box 'Beverly') 'Dublin Orange', HCC/AOS, a superbly formed, tangerine-orange flower with red lip.

Let me call to your attention the fact that miniatures will affect our accepted pricing methods. Presently most seedling *Cattleya* types are priced by pot size. With miniatures, a new method of pricing must be established because they mature and bloom in smaller pots. For example, most 2¾–3″ seedling pots of standard cattleyas

Grower: Fordyce Orchids *Photography: Madge Fordyce*

Potinara (*Slc.* Madge Fordyce × *Blc.* Mellow Vista)

are priced by major growers at $7.00 to $12.00 each, depending upon the cross and rarity. Obviously, standard cattleyas do not mature and bloom in these small pots but will bloom one to two years later in four- to five-inch pots and are then priced at $15.00 to $25.00 each by leading commercial firms. Miniatures frequently mature and bloom in 3″ to 3¼″ pots, a[illegible]me instances, require the same amount of time it takes to grow standa[illegible] - and 5″-pot size. Therefore miniatures should be priced separately from standards and priced according to their proximity of bloom. For example, *Sophrocattleya* Beaufort (*S. coccinea* × *C. luteola*) is often a full-grown plant when it blooms in a three-inch pot. It should not be priced as a standard seedling at $7.00, but as a mature plant at $18.00 to $20.00.

Has the thought ever crossed your mind that so much improvement has been made in the *Cattleya* alliance that there is little to be accomplished in the future? The whites and purples are exceptionally full-formed, heavy textured, truly gorgeous creations, and the yellows are rapidly achieving the ultimate in judging circles. I

Sophrolaeliocattleya Sue Fordyce 'Orange Sunset'
(*Slc.* Madge Fordyce × *Laeliocattleya* Amber Glow)

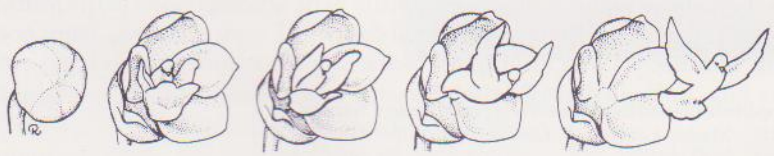
Grower: Fordyce Orchids *Photography: Madge Fordyce*

can recall some thirty years ago voicing that feeling to Ernest Hetherington as he guided me in the art of hybridizing. The wisdom of his observation has always remained with me. It should never enter the mind of the hybridizer that there is no longer any possibility of improvement. A defeatist or negative attitude has no place in hybridizing. Curiosity and the challenge of the unknown must be an absolute creed.

As I approach the miniature *Cattleya* alliance I ask myself what possibilities are available in combinations of intergeneric and multigeneric "Cattleya-type" hybrids. In my search through the "Alphabetical One-Table List of Genera and Intergeneric Combinations" found in the front of *Sander's List of Orchid Hybrids*, I was truly amazed to find I could list ninety-nine possible miniature "Cattleya-type" intergeneric hybrids. A large quantity of these are due to the dedicated efforts of W.W. Goodale and May Moir of Hawaii, whose contributions to orchid breeding are beyond compare in recent times. They have opened the eyes and minds of many hybridizers like myself to new, yet often unheard of hybrid combinations.

For the past three years I have been searching for, accumulating and hybridizing the miniature *Cattleya* types, the sophrolaeliocattleyas, splashed-petals and unusual greens. At this time I claim the distinction of being one of the world's greatest authorities on seed pods that have failed, or those that produced less than 50 seedlings. The rare and the beautiful are often the most difficult to breed, and I have often mused that had I chosen standard purple cattleyas to pursue, I could now have twenty greenhouses full of seedlings instead of a modest quantity of miniatures. And yet, I find the challenge of the unknown beckons, and my imagination fills with the promise of bright bouquets of *Cattleya*-like blooms held in clusters above petite foliage.

Let me assure you that the world of miniature *Cattleya* breeding has just begun to be explored and the keenest joy in hybridizing is in the effort towards a distant goal, not necessarily in the winning itself. — *7259 Tina Place, Dublin, California 94568.*



The Front Cover

IDEALLY, every new hybrid should show some improvement over its parents. According to the A.O.S. judges present in New York on January 20, 1982, such was the case with a first-bloom seedling of *Masdevallia* Copper Angel (*veitchiana* × *triangularis*). *Masdevallia* Copper Angel 'J & L', pictured on this month's front cover, received an AM/AOS (81 pts) at that time, displaying five flowers on a small plant. The award description reads, "A new hybrid combining the best qualities of both parents. The floriferousness and upright stem of *Masd. triangularis* combine with the superior coloration of *Masd. veitchiana* to give a striking plant." The flowers measured 9.0 cm (3½ inches) from the tip of the dorsal sepal above to the crossed tips of the lateral sepals below. Once again, Charles Marden Fitch provides the fine front-cover photography. More on this, and other new *Masdevallia* hybrids can be found in the article, "Masdevallia veitchiana in Modern Hybridizing" beginning on page 237.