Judging Vandas
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What judges mean by "a *Vanda*" is much less clear than what we mean by "a *Cattleya*," "a *Phalaenopsis*" or "a *Paphiopedilum*." Unlike other major genera, *Vanda*, for judging purposes, is less defined, more amorphous; lacking a clear division into the various types and lines of breeding. No one would expect bifoliate cattleyas to conform to standards for *Cattleya labiata* types nor members of *Phalaenopsis* Section *stauroglottis* to conform to the standards for *Phalaenopsis amabilis*. Similarly large differences go unnoticed, apparently, for vandas and ascocendas. The purpose of this article is to attempt a definition of the types within *Vanda* in the broad sense and to direct attention to floral characteristics which, if properly judged, will lead to the improvement of these types.

The first distinction to be kept firmly in mind is that *Vanda* and *Euanthe* are two quite different genera. Although the Royal Horticultural Society continues to register hybrids of *Euanthe sanderiana* as *Vanda*, many botanists consider them different genera. All horticulturists who have intimate knowledge of these plants recognize their aesthetic vegetative differences. The large-flowered hybrids called vandas in horticulture are more scientifically referred to as *Vandanthes* (*Vanda* x *Euanthe*). All are the result of hybridizing *Euanthe sanderiana* with true species of *Vanda*. Most of the hybrids in cultivation derive from just four *Vanda* species: *Vanda coerulea, Vanda dearei, Vanda luzonica* and *Vanda* tricolor (including var. *suavis*).

EUANTHE SANDERIANA AND STANDARD VANDAS Any discussion of standard vandas must begin with an examination of *Euanthe sanderiana* and its contribution to breeding. The qualities it brings to hybrids are currently enshrined in the *AOS Handbook on Judging and Exhibition* (10th Edition). The qualities of form that are prescribed there are qualities of an idealized *E. sanderiana*. Indeed, standard *Vanda* breeding is best thought of as attempting to create a flower in all aspects like *E. sanderiana* except in color and patterns of color. Because *E. sanderiana* is recessive in breeding most aspects of color, repeated backcrosses to the species have created modern hybrids similar to it in most features except color.

Euanthe sanderiana has many virtues, among them:

- The flowers are large, up to 5&1/2 inches (14 cm). Only *V. coerulea* among *Vanda* species approaches this size.
- *Euanthe sanderiana* is full-formed. Unlike *Vanda* species with their distinctly clawed petal and sepal bases, the petals and sepals of *E. sanderiana* are very broad at the base. In its best clones, this species' flowers have no windowing (or fenestration) at their center.
- The flowers are flat. In the best individuals, sepals and petals are presented in a single plane, the flatness of which can be judged by looking across the flowers from the side.
- The flowers are carried on erect spikes which in good clones stand clear of the top of the plant, presenting the flowers without the distraction of the foliage.

- The flowers are symmetrically arranged in a cylindrical head. In good specimens they are neither too crowded and overlapping one another not too widely spaced, leaving holes or windows in the inflorescence.
- *Euanthe sanderiana* produced multiple flower spikes simultaneously: two if typical, three or four not uncommon and five or six not too rare. This is the result of the species being a classic short-day plant, blooming only once per year in late summer to early winter from all of the leaf axils produced during its annual growth cycle. This quality is also valuable from a breeding standpoint because when bred to those *Vanda* species that are long-day, spring-blooming plants, free-flowering, indeterminate hybrids result. This feature more than any other explains the popularity of vandanthes and asocendas as horticultural subjects.
- *Euanthe sanderiana* is color recessive but dominant for shape. Although the distinctive marked pattern on the lateral sepals persists in primary and many secondary hybrids, the pink, base color of the flowers is recessive. Crossed to any *Vanda* species, *E. sanderiana* produces flowers more like itself in shape but much more like the *Vanda* in color. Repeated selection for *Vanda* color and *Euanthe* shape in successive generations has been the persistent theme of *Vandanthe* breeding.

Although *E. sanderiana's* flowers possess many aesthetic virtues, the plant itself presents many horticultural problems, including:

- They are large, often five or six times larger than *Vanda* species.
- They are slow growing. *Euanthe sanderiana* usually takes six to eight years to mature.
- They have little cold tolerance. They are slowed, or even damaged, by temperatures below 50 F (10 C).
- They are weakly rooted, producing all of their roots near the base of the plant. This quality makes them adverse to change or disruption by repotting.
- *Euanthe sanderiana* is a high-light-requirement plant. The deeply V-shaped leaves (as opposed to *Vanda*'s strap-shaped leaves) are adapted to the high-light environment of its near-equatorial habitat on Mindanao. This negative plant architecture makes *E. sanderiana* poorly adapted to greenhouse culture and was the second reason for breeding *E. sanderiana* to *Vanda*. The introduction of Vanda genes overcomes these problems, making *Vandanthes* possible as horticulturally successful plants. In addition to color, *Vanda* species contribute cold tolerance and vigorous growth to modern *Vandanthe* hybrids. Much as a certain aesthetic would like to remove nearly all *Vanda* characteristics from our hybrid's flowers, only plants with substantial *Vanda* genes posses sufficient vigor to be commercially viable. Historically, the breeding of *Vandanthes* parallels in some ways the breeding of *Phalaenopsis* Section *Phalaenopsis* (formerly *Euphalaenopsis*) to species in *Phalaenopsis* Section *Stauroglottis*, to produce new color types. Unlike the breeding of modern *Phalaenopsis*, which began with advanced hybrids involving four species in Section *Phalaenopsis* and used numerous species from Section *Stauroglottis*, *Vandanthe* breeding used only four species of *Vanda* and proceeded with repeated backcrossing to *Euanthe*, selecting for *Euanthe* form while preserving *Vanda* color. Despite the overwhelming

predominance of *Euanthe* in modern hybrids, qualities of the *Vanda* species are still evident in advanced hybrids. A sophisticated aesthetic judgment should reckon with the distinct color forms and judge them according to type and line of breeding and improvement on type. At present these types are not nearly so well-defined or widely known as are similar distinctions in other major genera such as *Cattleya, Phalaenopsis, Paphiopedilum* and *Cymbidium*. Knowledge of the ancestral species and the lines of breeding is essential to evaluate various types of *Vanda* hybrids.

VANDAS ARE NOT ASCOCENDAS In defining types of vandas, an obvious but frequently ignored distinction is that vandas are not ascocendas. The catch phrase "Vandas and Ascocendas" is an intellectual trap snaring one into ignoring the great differences between these plants. Vandas derive their color from the *Vanda* parent while ascocendas have the brilliant *Ascocentrum* species in their background. At any comparable level of breeding vandas will possess much larger, heavier-substanced, clearly patterned flowers of more open shape while ascocendas will be smaller, fuller and more brilliantly colored. *Vanda* color, while not so bright, is more subtle and more intricately patterned than the concolor ascocentrums. Ascocentrums also possess a different petal shape; broadest at the distal end but only slightly tapered at the base. Ascocentrums also possess a different petal shape: broadest at the distal end but only slightly tapered at the base. *Ascocentrum* species are all commonly known in clones that possess closed full forms without any windowing. Windowing, in ascocendas bred to *Vandanthe* hybrids, should be considered nearly a fatal flaw. That this is not the case in modern judging is perhaps the result of the overwhelming influence of color on contemporary judgment but more likely the result of making allowance for form that would be acceptable in a *Vanda*, for an *Ascocenda*. Conversely, vandas which never have totally closed form in the species are given less tolerance for windowing than they deserve but are unfairly expected to have color of the brilliance of ascocendas. The corrective to these widespread discrepancies in our judging lies in a more thorough knowledge of the species and their influences on various lines of breeding.

VANDA COERULEA – THE PREEMINENT PARENT First among the *Vanda* species in importance and influence is *V. coerulea*. In many ways it is more spectacular than *Euanthe sanderiana*. The long spikes of large flowers that are almost, if not quite, true blue, continue to impress contemporary growers as they did early hybridists. Ranging in color from white to pink to pale blue through shades of intense blue to dark violet, *V. coerulea* has contributed more color to modern hybrids than any other *Vanda* species. Both modern blues and modern pink hybrids derive much of their color from V. coerulea. In addition to its blues and pinks, the tessellated pattern of blue on a white base color is a major contribution to modern hybrids. This pattern, which is rarely seen in wild plants, is vividly manifest in most primary hybrids and in the cultivated, improved strains of the species. It carries through to a lesser degree in many complex hybrids where, on close examination, a more subdued pattern of tessellation is evident beneath the predominant pink or purple color. *Vanda coerulea's* long spike is another major asset. In well-grown plants, this can reach three feet. Many *Vanda* hybrids would not raise their heads of flowers, beyond their foliage without the uplifting influence of *V. coerulea*. Large size is

another asset of this species. Hybrids from V. coerulea are the largest flowered of all vandas. Because of the hybrid vigor they manifest, *Vanda Rothschildiana* and similar *V. coerulea* hybrids are frequently larger than either parent. The relatively narrow but tall plants of *V. coerulea* when crossed to *E. sanderiana* and hybrids strongly influenced by it, produce plants that are taller, narrower and more vigorous in growth. This vigor is manifested in larger, more numerous flowers on longer stems. More than 50 flowers have been observed on a single branched spike in these hybrids. Some clones of *V. coerulea* also flower up to six or seven times a year, a quality that is frequently transmitted to its progeny. In addition to contributing to general vigor, the species also confers cold tolerance on its hybrids.

Poor shape is the chief drawback of *V. coerulea*. In wild clones, the petals are frequently twisted 180 degrees so that the backs of the petals are facing forward. This quality is not present in the cultivated, improved strains of the species and usually disappears in its hybrids. The petals and dorsal sepals are, however, as in all true *Vanda* species, strongly clawed (narrowed to a very thin stemlike base). This quality carries through to most primary hybrids as a windowing at the center of the flower. Primary *V. coerulea* hybrids with a closed form should be scored highly for shape. Those with slight windowing should be allowed considerable latitude. Improved strains of the species possess fuller form, shortening the claw but not eliminating it. These fuller-formed varieties of *V. coerulea* also tend to slight, or in some cases, extreme cupping of the flowers. This quality has come to be accepted in recent contemporary judging as a trade off for fuller form. As fuller-formed types of both *V. coerulea* and its hybrids become more common, those clones that are both full and flat should be elevated. The margin of the sepals and petals of *V. coerulea* are relatively smooth and even, and this unruffled quality can be expected in its progeny. Overall, with the vast improvement of the species itself and the general improvement of the species itself and the general improvement of *E. sanderiana* hybrids in general, a new generation of superior *V. coerulea* hybrids has emerged in which merely average plants now are equal to awarded clones of 20 years ago. These plants exhibit much of the very best to be obtained in any *Vanda* hybrids: numerous large flowers on long stems of vivid color. To preserve all of these qualities with a slightly improved shape should be the goal of *Vanda* breeding. Flowers like those of the best modern *V.* Rothschildianas in a full range of colors are the distant future of *Vanda* breeding.

THE TWO VARIETIES OF VANDA TRICOLOR After *V. coerulea, V. tricolor* is the species most influential in modern hybrids. It is currently considered to have two botanical varieties, var. tricolor (or var. *planilabris*) and var. *suavis*. These were long considered separate species and this is reflected in registration of early hybrids. Their rather dubious lumping together in modern literature should not deflect a judge or a breeder from awareness of their vastly different qualities. Although nomenclatural confusion exists in the literature, clear differences are evident in the flowers bred from these two varieties.

Vanda tricolor var. *tricolor*, is a dull, pale-yellow flower strongly overlaid with chestnut-red mottled markings. This color does not extend to the edge of the flowers that are

distinctly margined in pale yellow base color. Six to eight flowers are carried on a short, lax flower spike among, or in front of, the foliage. The lip is more broad than long and colored dull rather than bright red. These yellow forms of *V. tricolor* have made some contribution to modern yellow hybrids but overall the largest contribution of this variety is to the dark purples and dark reds of modern hybrids. The flavinol pigments from *V. tricolor*, when combined with the anthocyanins from *V. coerulea* and V. luzonica, produce dark but usually dull color. The popularity of these dark colors with judges (but not the general public) has led to the introduction of more and more *V. tricolor* genes into modern hybrids. Very dark flowers have resulted, but many of the negative qualities of the variety have been introduced also. Early hybridists were aware of this danger. Indeed, the Hawaiian hybridists, playing on its other name dubbed var. *planilabris* "variety plenty rubbish" for this reason. While *V. tricolor* var. *tricolor* contributes dark color it also dulls color. Occasionally clearer colors emerge in these lines of breeding but these are the highly desirable exception not the rule. Other negative qualities of *V. tricolor* var. *tricolor* appear in its hybrids as well. The elusive goal of producing dark-colored flowers that are evenly concolor is also thwarted by the influence of this variety of *V. tric*olor. Modern dark reds and purples almost invariably retain a picottee of light color and wavy margins to their petals from their *V. tricolor* ancestor. Similarly, color in the petal blades of these hybrids is frequently uneven and mottled or broken; a very great distraction aesthetically.

As plants are bred more and more toward V. tricolor qualities in search of dark color, other negatives emerge. Many dark flowers are small as the influence of both *E. sanderiana* and *V. coerulea* are reduced. Similarly, as flowers get darker, frequently spikes get shorter. Many of the darkest hybrids carry their flowers on lax spikes among the foliage or not quite clear of it on less-than-desirable spikes that fail to top the plant. Taken as a whole the Hawaiian judgment on the negative influence of *V. tricolor* var. *tricolor* is fairly accurate.

On the other hand, *V. tricolor* var. *suavis*, long considered a separate species (likely to be thought so again as more accurate information on its distribution and genetics becomes available), has contributed many positive qualities to modern vandas. Unlike *V. tricolor* var. *tricolor*, *V. tricolor* var. *suavis* possesses a strong upright spike that carries the flowers above foliage. The flowers themselves are both larger and more numerous (up to 15 or more). The most important quality of the variety is its distinct color. The milk-white flowers are heavily overlaid with crimson and the lip is also deep crimson in sharp contrast to the base color of the sepals and petals. In many clones a pale suffusion of color appears overall on the newly opening flowers. This quality may be responsible for *V. tricolor* var. *suavis*'s ability to produce solid-colored progeny. This suffusion and the coalition of the spots in its typical pattern have made a major contribution to the brilliance of modern pinks. It has also been important in breeding purples. Such vividly spotted clones as *V.* Gordon Dillon 'Lea', AM/AOS, derive their highly desirable pattern of color directly from *V. tricolor* var. *suavis*. Like var. *tricolor*, the margins of the petals of *V. tricolor* var. *suavis* are wavy and this quality is passed to its progeny. In general, its progeny also inherits its propensity to strong upright flower stalks. A fortunate quality of this plant is to produce progeny with flowers that are larger than expected. When bred to flowers of equal or slightly smaller size, *V. tricolor* var. *suavis* frequently produces

flowers in its offspring larger than its own. Unlike var. *tricolor*, the virtues of *V. tricolor* var. *suavis* far outweigh its faults.

VANDA LUZONICA'S INFLUENCE *Vanda luzonica* is the major contributor of vibrant pink color to modern hybrids. The base color of *V. luzonica* is white with only blotches of crimson at the ends of the sepals and petals and a ring of the same color around the column with more or less streaks of color in between these predominantly colored areas. Even though the flowers are mostly white, the crimson of *V. luzonica* is extremely dominant in its progeny. Bred to other vandas of whatever color, the offspring show strong pink color in all areas that are colored in the other parent. For this reason the line to modern pinks from *Vanda* Manila through *Vanda* Bill Sutton was quickly established. Other qualities of *V. luzonica* have also been influential. Its ability to bloom several times between autumn and late spring promotes floriferousness in its progeny. It is also one of the longest (although laxly carried) stemmed of vandas. Inflorescences of up to 20 flowers per spike are not uncommon. Its vivid lip is relatively short, unlike most *Vanda* species, which nearly equal or exceed the petals in lip length. The short, dark crimson lip and the concentration of color near the ends of the petals are the hallmark of *V. luzonica* in modern hybrids.

IN INFLUENCE OF VANDA DEAREI The fourth species to make a major contribution to *Vanda* breeding is *V. dearei*. Nearly all the modern yellow hybrids trace their origins to *V. dearei*. The species ranges in color from concolor mustard yellow to clear lemon yellow. It is dominant for color. Crossed to *E. sanderiana*, the resulting hybrid, *Vanda* Ellen Noa, resembles a more-open-formed *E. sanderiana* usually in a fairly deep shade of yellow with chestnut masking like the *Euanthe* parent. Backcrosses to *E. sanderiana* were made repeatedly. At each generation selections were made that retained the color of *V. dearei* and the shape of *E. sanderiana*.

By the late sixties, yellow-masked flowers resembling *Euanthe* in shape and *Vanda* in color were fairly well perfected. In the process, concolor yellows also emerged. Just as the masked types tended to follow *E. sanderiana* in shape, the concolor types resemble *V. dearei* in shape. Unlike the masked types, these concolors are far from being perfected. They frequently display a number of negative qualities that *V. dearei* also transmits to its progeny. In many forms of the species, the color lacks clarity and vibrancy. Although some concolor types more closely resemble the clear yellow, almost albescent varieties of *V. dearei*, a large number of modern hybrids show the influence of the more muddy brownish yellow strains of the species. Similarly, concolor yellows have also inherited much more of the shape of *V. dearei*. Consequently, concolor yellows of full form are as rare as those of masked yellows are common. *Vanda deari*'s short, few-flowered spike has also had a pronounced influence on these hybrids. Concolor yellows of clear color, good shape, and held on long spikes that display the flowers well above the foliage are much to be prized as few plants of this coloration possess more than one of these qualities at once. All of these negative qualities that limit the yellow hybrids of *V. dearei* also affect the dark purple and dark crimson hybrids, which have gained their depth of color from the influence of the flavinols of *V. dearei*.

TYPES OF VANDAS AND STANDARDS FOR JUDGING EUANTHE SANDERIANA AND MASKED PINK HYBRIDS

Euanthe sanderiana and the hybrids preponderantly influenced by it are analogous to *Phalaenopsis amabilis* and the white *Phalaenopsis* hybrids: no other types can approach them in several qualities that are considered the ideal. *Euanthe sanderiana* itself and the masked pinks that are virtually indistinguishable from it are the standard to which other types are compared. These flowers can be expected to approach perfect flatness, perfect fullness, to have full round petals and sepals that overlap, leaving absolutely no windowing. They can be expected to carry their flowers evenly spaced without undue overlapping on long symmetrically arranged spikes held well above the foliage. This ideal has only been approached by *E. sanderiana* and those hybrids that most closely resemble it in color. All other color types fall short of this and must be judged fairly by their lines of breeding and improvement on type.

OTHER MASKED COLOR TYPES Vandas with flowers masked like *E. sanderiana* but with colors other than pink most closely approach the standard set by the pinks. Masked yellows are common in clones that are nearly as flat and full as *E. sanderiana*. These usually have petals somewhat less round and frequently carry their flowers on shorter stems than would be seen in the best modern forms of *E. sanderiana*. They are also typically smaller than pink-masked types. Larger, fuller-formed flowers on longer stems are the sought-after improvement in masked yellows. In masked blues and purples, the standard is somewhat different. Because of the strong influence of *V. coerulea* on these hybrids, they frequently can be as large or larger than the pink types. As color deepens however, size tends to diminish. This influence of *V. dearei* and *V. tricolor* on dark flowers also produces weaker more open shapes and more ruffling at the margins of the petals. Spike length and strength also are less in the very dark types. As the pursuit of ever darker masked purples continues, those superior individuals that possess larger, more clearly colored, fuller, better-formed flowers carried on longer, stronger stems should be sought. As all of these movements toward the ideal are unlikely to be accomplished at once, those clones showing marked improvement in one or more of these qualities should be recognized.

Masked alba types also represent a separate category. All of the plants of *E. sanderiana alba* in cultivation originated from a very limited number of individuals. These highly inbred plants tend to be much weaker growers and, consequently, often have fewer, shorter, weaker spikes with less and smaller flowers. Hybrids of the masked alba type are appearing with greater frequency. Most of these are produced from selections out of yellow bloodlines since the *alba* form of *E. sanderiana* was a major contributor to yellow breeding. The distinctness of both *E. sanderiana alba* and these masked hybrids should be acknowledged and individuals that show improvement on the type in form, size and inflorescence should be recognized. A few also retain some vigor from their *Vanda dearei* ancestor and such vigorous individuals should be seen as having value worthy of recognition when this is displayed in greater size or floriferousness.

BLUES AND PURPLES Flowers that approach true blue color only exist in *V. coerulea* and the primary hybrids derived from it. The species itself continues to be improved at as rapid a pace as *E. sanderiana* and modern complex hybrids. Hybrids from *V. coerulea* continue, therefore, to improve with each generation of *Vanda* breeding. Clones of *V.* Rothschildiana, for example, which were awarded a decade ago or more are likely to be merely slightly above the average of a new generation of *V. coerulea* hybrids. These new hybrids tend to be more clearly and vividly tessellated. Those with the most brilliant markings tend to have inherited also the more open shape of *V. coerulea*. Clones with relatively full form also emerge showing more influence from *E. sanderiana*. These, alas, tend to have more subdued color. The most colorful of the full-formed types and the best formed of the most colorful of these new hybrids are both worthy of recognition. More complex hybrids, as they move away from the direct influence of *V. coerulea*, tend to improve in size and shape while length of stem and clarity of color fall off. The best-colored of the secondary and tertiary hybrids of *V. coerulea* are among the finest of hybrid vandas, combining the best of both principal ancestors: *E. sanderiana's* shape with *V. coerulea's* long stem and brilliant color. Darker purple complex hybrids usually show more influence from *V. tricolor* and *V. dearei*. These color forms, which are currently popular in both Thailand and the United States, bring with their dark color other less-desirable qualities from these ancestors. First, the dark color itself frequently is muddy. Second, shape tends to be more open in these purple flowers with more uneven or ruffled margins to the petals. Third, flower size is usually diminished. Finally, the flower spikes tend to be shorter, more lax with the flowers crowded and poorly arranged. The fact that the latter two qualities are not discernible in orchid-catalog photography has led to the mistaken assumption that these color types have been more improved than they are. The more clearly colored clones of these complex purples that show improvement in one or more of these regards deserve recognition.

TESSELLATED AND COMPLEXLY PATTERNED PINKS In addition to the masked pinks derived primarily from *E. sanderiana*, two other lines of breeding produce pinks. These are distinct types that should be judged by different standards. First, hybrids derived from *V. coerulea* frequently display pink color in a tessellated pattern identical to that which is usual in blues. Such pinks almost invariably emerge from selfings, sibbings or crossing of primary blue hybrids. What is occurring is not merely crossover of pink genes from *E. sanderiana*, *V. tricolor* or *V. luzonica*, but the Mendelian segregation of the recessive pink color that is occasionally seen in *V. coerulea* itself. Tessellated pinks frequently have large size, long stems and good flower counts because of their genetic proximity to *V. coerulea*. They are frequently less heavy in substance and more open in shape. These brightly colored long-stemmed types are deserving of recognition in their own right.

Dark pink to crimson types have been popular for some time. They are similar to the complex dark purple blues in their genetics and aesthetics. Here, however, the influences of *V. luzonica* and *V. tricolor* var. *suavis* are at work as well. As a result, complexly patterned pinks tend to have longer stems and somewhat brighter colors than comparable dark blue to purples. Pink to red-colored clones almost invariably emerge from crosses between dark blue-purple types and many of the problems that beset those also plague

dark pink. Like the purples, as pink to red color deepens, size, shape, and length of stem decrease. The color, too, frequently lacks clarity in these deeply hued types. Full-formed, large, clearly colored flowers on long stems is an ideal yet to be realized in dark pinks, but thanks to the influences of *V. coerulea*, *V. luzonica* and *V. tricolor* var. *suavis* is closer to being achieved in them than in the comparable dark purples.

CONCOLOR YELLOWS Nearly all modern yellows are derived from *V. dearei*. In addition to the masked types already discussed, large concolor yellows obtain their color entirely from *V. dearei*. Besides color, the species has bequeathed several other dominant qualities to its progeny. Perhaps because they were so persistently line-bred or simply because *V. dearei* is exceptionally dominant in form as it is in color, concolor yellow hybrids display the open shape of their *Vanda* ancestor to a great degree than any other color form of modern vandas. Similarly, yellows tend to have shorter, fewer-flowered spikes than any other color of *Vanda*. This is again directly the influence of *V. dearei*, which typically has no more than five or six flowers per spike. The rather dull shade of yellow seen in many strains of *V. dearei* is, unfortunately, frequently encountered in modern hybrids as well. Well-formed flowers of clear or bright color held on long erect stems above the foliage are much to be prized in concolor yellows. Recently, hybrids between concolor yellows and hybrids derived from *E. sanderiana alba* have been developed. Some of these have produced nearly concolor alba types with only small patches of the greenish yellow that is typical of *E. sanderiana alba*. These new whites should also be judged separately. The best of these should be given consideration for their improvement on a new type which struggles with many of the same limitations of *E. sanderiana alba* itself.

With an understanding of the species influences that underlie modern vandas and the directions and possibilities that hybridizers are currently exploring, American Orchid Society judges through their recognition of improvements in the various standard types will play an important role in helping to develop superior vandas for the new century. Worthwhile as this is, it merely foreshadows a greater role as the introduction of the remaining 40 species into hybrid *Vanda* bloodlines creates in the new century the same revolutionary excitement as has taken place recently in *Phalaenopsis* and *Paphiopedilum*. But that is another article, perhaps for a new Millennium.