

# Unraveling a Rainbow

## 6. Other Species, Other Dreams

**T**he preceding five articles in this series have been historical and analytical in nature. This final article will be largely speculative and in the “optative mood.”

Nearly all of the strap-leaf *Vanda* hybrids currently being grown have only five species in their background: *Vanda sanderiana*, *Vanda coerulea*, *Vanda tricolor*, *Vanda luzonica* and *Vanda dearei*. The success of selective breeding from these species can best be followed in William D. Burke’s admirable genealogies, *The Family Tree of All American Orchid Society Awarded Vandas*, which is available from booksellers advertising in the *Bulletin*. These award-winning vandas almost invariably trace their pedigrees to those five species. However, what is not revealed in Burke’s work is the absence of the 50-plus *other* species making up the genus *Vanda* in the broad sense.

This state of affairs might be the result of there being “good” species of *Vanda* and “bad” species of *Vanda* as, until recently, *Phalaenopsis* was assumed to be divided into “good” and “bad” species. The remarkable work in yellow and spotted phalaenopsis begun by Lewis and Varina Vaughn and the creation of striped phalaenopsis and whites with red lips which now have become standards point to the possibilities for breeders in exploiting single qualities in *Vanda* species which are otherwise unexciting.

*Vanda* breeding, in my view, is precisely where *Phalaenopsis* breeding was 25 years ago. Vandas were “discovered” as serious

### Creating *Vanda* Hybrids



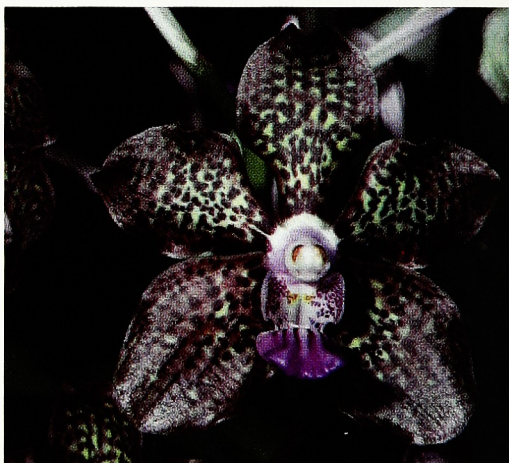
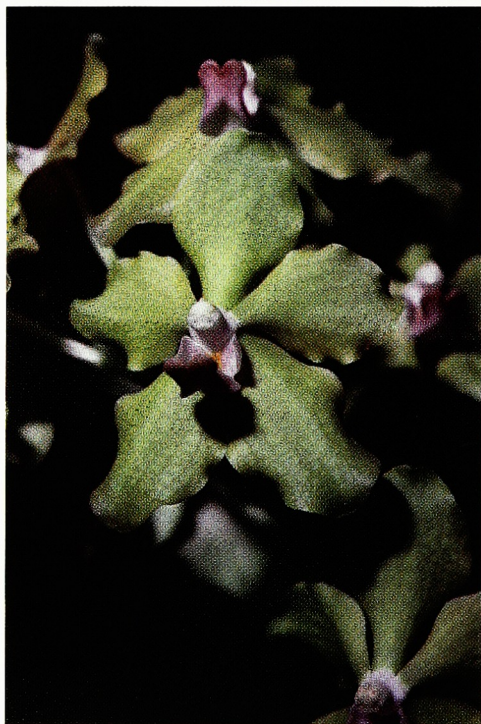
horticultural plants more recently than even phalaenopsis and, like phalaenopsis in the 1960s, their culture is just beginning to be understood by the majority of Northern growers. With the increasing realization that these plants, when well-handled, will bloom two, three or even more times per year and that the flowers will last 4-6 weeks (even phalaenopsis are not in bloom nearly so long per year), the interest in vandas will continue to increase and with this increased interest will come a demand for ever greater variety in these already varied flowers. The possibilities are immense and, as with phalaenopsis in the 1960s and '70s, the path for hybridizers lies in introducing characteristics of additional species to the already nearly perfected standard lines of breeding.

Many of the early hybrids made with *Vanda* species were less than satisfactory because the *Vanda sanderiana* types to which they were matched were far from the degree of perfection which is commonplace today. The fuller-formed and larger flowers of modern standard vandas, when bred to *Vanda* species, produce hybrids markedly superior to those of the 1950s and '60s.

An example of this is the excellent re-

<sup>1</sup>Motes Orchids, 25318 S.W. 162nd Avenue, Homestead, Florida 33031.

*Vanda tessellata*  
And Its Hybrids



**Clockwise from top left:**

**Vanda tessellata 'Vance', AM/AOS (84 pts.)**

*Grower: James & Nancy Vance*

**Vanda Violeta 'Fuchs Sky', HCC/AOS (79 pts.)**

*(tessellata × coerulea)*

*Grower: R. F. Orchids*

*Photographer: Bob East III*

**Vanda Mimi Palmer 'Teo Boon Hian', HCC/TOS**

*(Tan Chay Yan × tessellata)*

*Grower: Motes Orchids*

*Photographer: Alan Hoffman*

**Vanda Thanantess**

*(Thananchai × tessellata)*

*Grower: Motes Orchids*

*Photographer: Rita Feild*



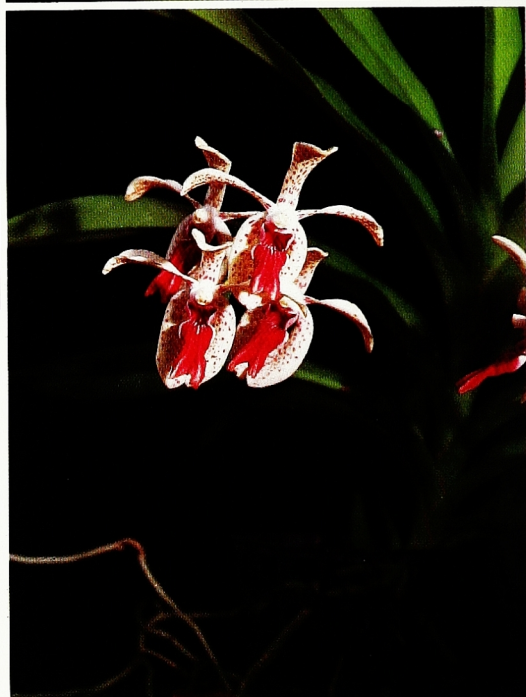
Crossing the yellow species *Vanda denisoniana* with the complex yellow hybrid *Vanda Kultana Gold* produced *Vanda Motes Honeybun*. The cultivar 'Golden Dawn' (left, photographed by Rita Feild) won a Highly Commended Certificate of 76 points from the American Orchid Society in September of 1986. Shown above in a photograph by Alan Hoffman is a very differently formed and differently colored clone of the same grex. Both were grown by Motes Orchids.

sults that have come from the crossing of *Vanda denisoniana* with *Vanda Kultana Gold*. This Thai hybrid, which was registered as *Vanda Motes Honeybun* after the clone 'Golden Dawn' received a Highly Commended Certificate from the American Orchid Society, has proved superior to early "primary" hybrids in many ways. (I use "primary" here in the sense of one parent being a species). 'Golden Dawn' exceeds early hybrids in its closed form and, for the parentage, its full shape, which, together with the interesting color pattern, garnered it its award. Other clones have proved fuller than typical "primary" hybrids and have other superior qualities as well. In comparison to the early hybrid *Vanda Ellen Noa* (*dearei* × *sanderiana*), these flowers are better-shaped, more clearly and brightly colored and have longer, better-held inflorescences. Of course, in comparison to modern hybrids, flowers of *Vanda Motes Honeybun* clones are smaller and more open but often are definitively superior in color.

Secondary *Vanda denisoniana* hybrids

bred from these "primary" hybrids, when crossed to the best standard yellows, can be expected to produce flowers rivaling modern yellows in form and size and exceeding them in color and length of inflorescence. Because of the superiority of modern hybrids to older *Vanda sanderiana* types, two generations may well suffice to accomplish what required four generations of breeding in *Vanda dearei* hybridization. Even if all of the progeny do not attain the fullest expectations, those clones that do can now be mericloned to produce an abundance of the finest new bright yellows.

Similarly, *Vanda tessellata* can be cited as an example of the success to be achieved using a species in breeding with superior modern types. The steely gray flowers of *Vanda tessellata*, with their clear markings and brilliant blue or violet lips, have long continued to interest hybridists. *Vanda Mimi Palmer* (Tan Chay Yan × *tessellata*) has received recognition in both Thailand and the United States. To all initial appearances, flowers of *Vanda Mimi Palmer* resemble an improved *Vanda tessellata*, larg-



The Himalayan species *Vanda cristata* holds promise for daring hybridizers. Even though it bears only a few flowers per inflorescence, it usually produces numerous inflorescences simultaneously, as shown above left in the cultivar 'Feuerbach', AM/AOS (81 pts.), grown by Mrs. Renate Schmidt. Hybridizers also might hope to exploit its beautiful lip coloration, as shown above right in Alan Hoffman's photograph of a flower on a plant grown by Motes Orchids. That such hybrids can inherit this lip color is seen in Martin Motes' remake of *Vanda Paki*, shown at right in a photograph by Rita Feild. This remake of the cross utilized *Vanda tricolor* var. *suavis* with *Vanda cristata*.

er, fuller and with a more lustrous texture.

Plants of *Vanda tessellata* from cultivated sources in Thailand possess many of these superior qualities, too. Some of these improved forms, according to *Vanda* expert Dr. Eric A. Christenson, differ markedly from *Vanda tessellata* in lip structure.

Taxonomy aside, these improved types have proved capable of producing extremely attractive hybrids. Two clones of *Vanda Violeta* (*tessellata* × *coerulea* — the same

greg when a natural hybrid is called *Vanda amoena*) have received American Orchid Society recognition. The clone 'Fuchs Sky', which was granted a Highly Commended Certificate of 79 points from the AOS in Miami in July of this year, had profuse inflorescences of steely blue flowers with brilliant blue lips. Doubtless a superior *Vanda coerulea* parent contributed much to the display of *Vanda Violeta*. But the texture, substance and brilliant lip were obvi-

ous contributions from *Vanda tessellata*.

Beyond its free-flowering, long-lasting qualities and its diminutive size, lip color may well prove to be one of the most important contributions of *Vanda tessellata* to *Vanda* breeding. The species appears to be capable of passing this lip color to its progeny independently of its overall color. Several of my clones of *Vanda* Thanantess (Thanachai × *tessellata*) are pale, dull chartreuse with a startling blue or violet lip. These flowers point to the possibility of creating distinctly two-toned flowers with brilliant pink, violet or blue lips.

*Vanda tessellata* shares this two-toned quality most strongly with three Himalayan species: *Vanda parviflora*, *Vanda pumila* and *Vanda cristata*. Of these, *Vanda cristata* is perhaps the most promising as a parent. Flowers of this species have clear green-yellow sepals and petals and a startlingly reddish lip. As with *Vanda tessellata*, *Vanda cristata* has shown itself capable of producing distinctly two-toned flowers.

My remake of *Vanda* Paki using *Vanda tricolor* var. *suavis* with *Vanda cristata* produced delicately spotted flowers with bril-

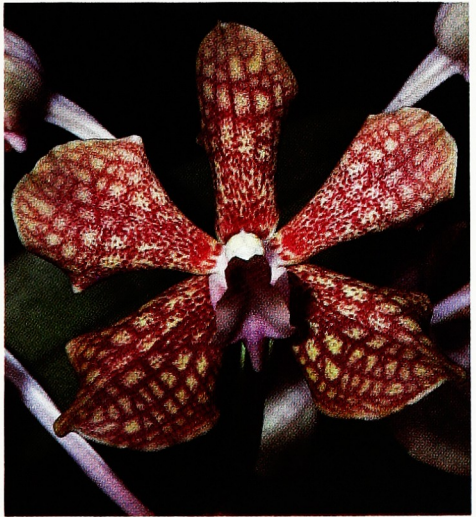
liant blood red lips. The earliest of these flowered in little more than 3½ years from seed on diminutive plants in 3" pots. Because of the *Vanda cristata* habit of producing only two or three flowers per stem, inflorescences of *Vanda* Paki thus far have been short. But the *Vanda cristata* habit of producing six or more inflorescences simultaneously makes for exceptionally free-flowering hybrids on small plants.

*Vanda parviflora* also possesses the same virtues of color and numerous inflorescences as *Vanda cristata* but has many more flowers per stem. Alas, these flowers are also much smaller, as the species name implies. Perhaps the as yet unmade primary hybrid of *Vanda cristata* and *Vanda parviflora* would prove to be an excellent parent for free-flowering miniature vandas.

The shy blooming habit of *Vanda pumila* makes it of less immediate interest, although no other species of *Vanda* is so purely white and its fleshy reddish lip could prove worthy of attempting to be brought into a second or third generation.

A Burmese species which seldom has been used in hybridizing is *Vanda bensonii*.

*The Burmese species Vanda bensonii (left) has seldom been used in hybridizing. One exception to that statement is Vanda Motes Nutmeg (right), a cross of Vanda bensonii and the complex hybrid Vanda Queen Kaumana. Both specimens illustrated here were grown by Motes Orchids and photographed by Alan Hoffman.*



The most outstanding feature of this species from a breeder's point of view is its long stems of widely spaced flowers. Thai breeders have used this species in several hybrids, such as *Ascocenda* Wichot and *Ascocenda* Nopawan, to create longer-stemmed ascocendas with better spacing of the flowers. A not-too-surprising result, in addition to spacing the flowers, was an intensifying of the color in dark blue flowers. Similar effects can be expected from hybrids of *Vanda bensonii* with modern *Vanda sanderiana* types, which also frequently suffer from too-crowded stems.

*Vanda* Motes Nutmeg (*bensonii* × Queen Kaumana) produces long, erect inflorescences of well-held flowers on relatively small plants. The exceptional substance of these flowers gives them keeping qualities that usually last until flowers on another inflorescence are ready to open. This free flowering is, doubtless, the result of crossing a predominantly fall-blooming *Vanda sanderiana* type to the spring-blooming species. The color, while satisfactory, is too muted to be breathtaking. But the surprisingly clear tessellated pattern of the color is a pleasant bonus. *Vanda* Motes Nutmeg, long-stemmed, free-flowering, long-lasting, interestingly patterned, is not

a great hybrid. But it has qualities that can be conveyed to secondary hybrids of real value.

The prospect of overall tessellated flowers in colors other than lavender/blue directs attention to the Indian species *Vanda stangeana*, which I think has potential as a new source of yellow vandas with clear tessellations. Although most clones of *Vanda stangeana* are a rather muddy mustard color, some rare individuals, such as 'Motes Tartan', are clear yellow with an overlay of darker yellow "plaid." If this clarity of color can be transmitted to larger flowers, a new line of yellows will emerge.

Hybrids of *Vanda stangeana* with such modern yellows as *Vanda* Rasri Gold, *Vanda* Petchaburi Gold and *Vanda* Motes Butterscotch are still in flask. We can hope that in addition to a dramatic new color pattern in their flowers, these will produce smaller, more free-flowering plants which also might prove more cold tolerant.

*Vanda scandens* is another species with as yet untested hybrid potential. The patterns of brown color in its sepals and petals might prove to be a pleasant novelty in larger flowers. Although not quite as large as *Vanda dearei*, the flowers of *Vanda scandens* are of good size (1½"-2") and are more

*The unusually large, fringed lip of the Philippine species Vanda roeblingiana is unique among the strap-leaf vandas. What promise it holds for adventuresome hybridizers! Will it turn out to be the equivalent for vandas of what Brassavola digbyana is for the Cattleya alliance? The specimen shown here was grown by Motes Orchids and photographed by Bob Smith.*





The beauty of the seldom-seen *Vanda scandens* (left) is evident in Alan Hoffman's superb photograph of the cultivar 'Mary Motes', which won a Certificate of Horticultural Merit of 82 points in Miami in mid-October. This species from Mindanao and Borneo demonstrates the potential for new color patterns. So, too, does *Vanda stangeana*, especially in the cultivar 'Motes Tartan' (right), also beautifully photographed by Alan Hoffman. Both specimens were grown by Motes Orchids.

numerous (up to nine per stem) than *Vanda dearei*.

Moreover, *Vanda scandens* is the most fragrant of *Vanda* species, exceeding even *Vanda dearei* in this regard. *Vanda scandens* may prove of use when recapturing the wonderful fragrance of *Vanda* species once again becomes a goal of hybridists. Fragrance is usually lost in the second generation of hybridizing with the scentless *Vanda sanderiana* and *Vanda coerulea* but surprisingly can re-emerge at several generations removed. Advanced blue hybrids, particularly those that manifest clear influence from *Vanda tricolor*, occasionally carry that species' fragrance. I have selected clones of *Vanda* Suwapee and *Vanda* Motes Indigo which possess fragrance and am breeding these back to fragrant species in the hope of re-introducing this delicious quality into *Vanda* hybrids.

Another species seldom seen in cultivation and seldom used in hybridization is *Vanda roeblingiana*, which comes from high elevations on the island of Luzon in the Philippines, a fact that seems to make it temperamental in areas where other vandas are usually grown. This quality might prove to be the greatest contribution of *Vanda roeblingiana*. Its yellow flowers over-

laid with glossy mahogany brown are interesting. But the lip is arresting. No other species approaches *Vanda roeblingiana* in the ornateness of its lips. If it is ever bred into larger, more standard types, the fringed lip could make this species the *Brassavola digbyana* of the *Vanda* alliance.

Another Philippine species that interested early hybridists but has since been little used is *Vanda lamellata*. It occurs in many, many forms and has at least two distinct varieties. The typical form is hardly exciting, producing yellow flowers overlaid with dull brown. The two principal varieties, however, are striking plants with great horticultural potential.

*Vanda lamellata* var. *boxallii* is the form most widely grown. The clone 'Margaret', AM/AOS is an excellent example of the typical color pattern of this variety. The clear yellow-green dorsal sepal and petals (the latter flushed with brown at the tips) are set off by distinctly marked lateral sepals divided clearly in half lengthwise by chocolate brown markings on the inner edges. The brilliant lip of clear rosy lavender is strikingly set off by the color of the lateral sepals. This clear definition of color, which is the glory of *Vanda lamellata* var. *boxallii*, is carried even further in the culti-



From the Philippines and Taiwan comes *Vanda lamellata*, a species that hasn't been used much in hybridizing. The somewhat small flowers (right) produce recurved sepals and petals (left), characteristics which could produce less-than-desirable qualities in its progeny. However, as many as 25 fragrant flowers are borne per inflorescence. The specimen illustrated here was grown by Motes Orchids and photographed by Alan Hoffman.

var 'Rose', HCC/AOS, in which the lateral sepals are entirely colored with chocolate brown and the petals are neatly and symmetrically divided in half by this color. This distinctive pattern of color represents the greatest potential in breeding of *Vanda lamellata* var. *boxallii*. The success of *Ascocenda* Khun Nok (*Vanda lamellata* × *Ascocenda* Madame Panni) in creating pleasing new patterns of color points to the potential in creating similarly patterned vandas.

*Vanda lamellata* var. *remediosae* has an identical color pattern to var. *boxallii* but in more muted colors. At its best, in such clones as 'Mary Motes', CHM/AOS, the overall color is almost white and the overlay on the lateral sepals is paler tan than in var. *boxallii*. The lip is also subdued to a pale rose-violet. *Vanda lamellata* var. *remediosae* in such albescent forms has great potential to produce pastel shades.

Both of these major varieties of *Vanda lamellata* flower very freely on well-grown plants. They can produce six to eight inflorescences per year, often blooming with four inflorescences at a time in superior

cultivars. The erect multiple inflorescence habit, distinctive color and numerous flowers possible from *Vanda lamellata* have not yet been fully explored in *Vanda* breeding.

Another species whose full potential has yet to be explored is *Vanda merrillii*. This species was used in a number of hybrids in the 1950s but these, by and large, were not carried forward into second-generation hybrids and are not now commonly in cultivation. The open shape and relatively small flowers of *Vanda merrillii* were the disqualifying faults of these early hybrids. The virtues of this species (its deep red color and its glossy texture), while manifest in such early hybrids as *Vanda* Mary Foster (× *sanderiana*) and *Vanda* Admiral Radford (× *Phallax-Burgeffii*), were never pursued with the vigor that led to the creation of modern pink vandas line bred from *Vanda luzonica*. Nevertheless, *Vanda merrillii*, which in some clones is almost solid ruby red, possesses color which has yet to be seen in advanced hybrids. Moreover, the highly glossy texture of *Vanda merrillii*, more striking than that of any other *Vanda*



species, persists into second- and third-generation hybrids, imparting a lacquered depth of color unlike any other line of *Vanda* breeding. Its color and texture make *Vanda merrillii* a parent of great potential for breeding with full-form standard types.

In order to achieve acceptance for some of the truly new directions in *Vanda* breeding that I am advocating, certain aesthetic prejudices, admirably defended by Dr. David L. Grove in the October *AOS Bulletin* (page 1112) need to be challenged. The first of these is that only flowers of the *Vanda sanderiana* type are truly beautiful. This is the same type of sensibility that gave us extra-large lavender cattleyas and “tea cup” paphiopedilums and, doubtless, for some these types will remain the only beau-

tiful cattleyas and paphiopedilums. Others, of more catholic sensibilities, find it easier to see beauty in these genera among many species and in the primary hybrids manifesting the positive qualities of the species.

Second, contrary to Dr. Grove’s opinion, many early *Vanda* hybrids, such as *Vanda* Gilbert Triboulet, *Vanda* Flamerolle and *Vanda* Violeta, did not lose *inherent* beauty or appeal but were merely superseded by changing tastes, as were the original *Sophrocattleya* Batemanniana, *Paphiopedilum* Iona and *Phalaenopsis* Cassandra in their time. Times change. Dr. Grove’s “hardy souls,” those breeders who like novelty not for its own sake but for the aesthetic potential in moving beyond the cliché, will find comfort in the frequently expressed opin-

*Several varieties of Vanda lamellata are recognized, among them Vanda lamellata var. boxallii. This variety from the Philippines produces more brightly colored flowers. Shown here are two clones that won AOS awards this year in West Palm Beach, Florida. At left is 'Margaret', AM/AOS (81 pts.). 'Rose', HCC/AOS (79 pts.) is shown at right. Both specimens were grown by Motes Orchids and photographed by Greg Allikas.*



*Vanda merrillii* occurs on the Philippine islands of Luzon and Negros. Its lacquered, red-tipped sepals and petals offer interesting opportunities for new color patterns in strap-leaf vandas. This specimen was grown by Motes Orchids and photographed by Alan Hoffman.



ion of people at orchid shows that *Vanda* Mary's Dimity 'Mary's Dimity' (see front cover of July 1988 *Bulletin*) and some of its siblings were not merely beautiful but "the most beautiful" *Vanda* they had ever seen. Beauty is, indeed, in the eye of the beholder.

The early *Vanda* hybridists surely could not have dreamed of the degree of perfection which line breeding from *Vanda sandariana*, *Vanda coerulea*, *Vanda luzonica*, *Vanda tricolor* and *Vanda dearei* would achieve. Their objectives were more limited, namely to create improvements in existing types and to make good hybrids. The advent of cloning similarly was beyond their horizons.

The goals of a modern *Vanda* hybridist should be different. Orchidists long have been in a dark wood of error in search of the "true cross." With mericloneing now so

straightforward and commonplace a procedure, the hybridist's goal should be to produce crosses which will yield some individuals of exceptional quality that can, through cloning, become part of the permanent heritage of orchidists everywhere. The superlative qualities of the various *Vanda* species discussed in this article will doubtless find their way into modern collections in this manner.

Perhaps more than any other genus, vandas possess potential for complex and rapid advances in hybridization. Today's standard types will continue to be bred. But new colors, new patterns, miniaturization and fragrance are all doubtless in the future of vandas. The multi-flowered inflorescences of the plants will appear several times a year, providing, as George Bernard Shaw said of marriage, "the maximum of temptation with the maximum of opportunity." And what orchidist has ever escaped the temptation to add another hue to the rainbow? ■



The red coloration of *Vanda merrillii* is even more pronounced in this clone grown by Motes Orchids and photographed by Rita Feild.