SPEAKER SEGMENT FOR JANUARY 19, 2019

Our speaker for January was Norman Fang of Norman's Orchid Nursery, who came to speak for us all the way from Montclair, California. His discussion was on the new color forms of species *Phalaenopsis* orchids that are being discovered in the wild and how they are being introduced into cultivation. Some might ask why these new color forms are just now being discovered. The reason is that there are new areas of jungle forest, which were previously inaccessible until now, that we are beginning to explore on remote islands. Here are some of the highlights discussed from his presentation.

Phalaenopsis bellina (synonym *Phal. violacea* var. Borneo) is a species orchid that is native to Malaysia in the Borneo island area. It grows in shady, humid lowland and swampy and riverine forests low on trees or on branches overhanging stream banks. This epiphytic orchid has a short, pendant stem and broad, rounded light green, glossy leaves. The flowers are a buttery green color with a magenta coloration on the lower half of the flower are of waxy substance and highly fragrant. A desirable color form of this species that has been in cultivation since the mid 1980's is the indigo strain. When this strain was first introduced into cultivation approximately 20% of seedlings were expected to bloom with flowers in vibrant shades of purple and blue. Now through selective breeding, Norman has created a new indigo strain where 100% of the offspring will bloom in true indigo colors. In cultivation in the near future we can expect to see *Phal. bellina* var. murtoniana, a variety that has yellow coloring on the petals and sepals instead of the typical green and magenta markings. Additional forms of this species that we can expect to see are *Phal. bellina* var. coerulea (or green contrasting with blue form), an alba form, and a 6-petaled form created in the lab by a mutation that occurred during tissue culture. Norman says that this is a good species *Phal* for us to consider growing since the conditions we have here during our Florida summers with our heat and humidity are ideal.

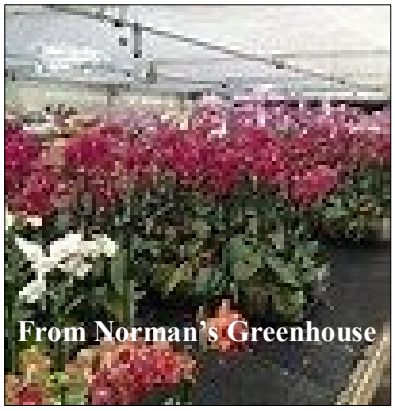
Another important species utilized in cultivation for which there are exciting new color forms available is *Phal. equestris*, a native to the Philippines and Orchid Island of Taiwan. This species is popular in breeding and is used to create miniature hybrids with multiple spikes of tiny, clustered flowers. Flower spikes generally begin forming in May with the peak flowering period occurring between September and April. The small flowers are densely clustered together on a many flowered inflorescence, with the flowers opening in succession over a 4-6 month period. New color forms to expect from this species include *Phal. equestris* var. orange, rosea, and coerulea. Also, at his nursery Norman has developed a peloric form in which the petals mimic the lip, which he calls *Phal. equestris* 'Montclair Peloric'.

Speaker Segment Continued for January 19,2019

A native to the jungles of Indonesia *Phal. gigantea* is the largest known *Phalaenopsis* species named for the giant size of its leaves, which can grow to over two feet in length on a mature plant. There are two areas, Sumatra and Sumba Islands, in the jungles of Indonesia where this orchid is typically found. Due to evolution and isolation on the islands the plants found in these two areas differ from one another in both leaf shape and flower color form. In its native habitat the reason that this plant reaches such a large size is due to its exposure to constant heat and humidity in its jungle habitat – even at night the temperature can still be 85°F. This plant does not always bloom every year due to fluctuations in diurnal temperature changes and therefore puts its efforts towards continuous growth thus, reaching its enormous size. Recently a true alba form with smaller, silver leaves was discovered in the jungles of Indonesia by a collector during land clearing of forests to make way for palm plantations for oil production. This new to cultivation alba (or green) form is very exciting to growers since it has proven easier and faster to grow than the regular color forms. *Phal. gigantea* is a very important species in hybridization. This species is capable of passing along several desirable traits to its hybrids including spotted flowers (our harlequin *Phals*), thick flower substance with a diamond dust texture, and producing rounder, fuller floral segments.

Phalaenopsis lobbii is a charming miniature species that is found from the eastern Himalayas to Indochina. Typically forms found in cultivation are coming from cooler growing areas in Nepal and northern Thailand. Now because of changes in commerce and access to jungle regions in North Vietnam warm growing species of *Phal. lobbii* have been discovered revealing new color forms. The new warmer growing varieties feature deeper shades of yellows and orange on the lip of the flower. This species produces a few flowered inflorescence bearing between 3-7 flowers that open sequentially. They can flower more than once a year but flowering occurs most often in the spring. The flowers are relatively large compared to the size of the plant and the flower color of the lip changes or darkens as the flower ages.

One of Norman's favorites is *Phal. schilleriana*, a species native to the Philippines with striking tiger stripped foliage. This orchid produces large displays of arching, pendant inflorescences with fragrant rose colored flowers between February and March. A darker color form of *Phal. schilleriana*, var. purpurata, has been discovered within a new area of the Philippines. Also, new to cultivation Norman is responsible for introducing the silver leaved variety of this species from a stock plant owned by one of his friends for over 30 years. The silver leaved variety is unique in that the leaves of the plant stay small and have a very ornamental look. Another important mottled leaved species also from the Philippines is *Phal. stuartiana*. This species is often utilized in hybridization and it is where we get all of our French-spotted *Phalaenopsis*. Now a yellow form of *Phal. stuartiana* has been discovered, and already preparations are being made to cross it with *Phal. philippinensis* and *Phal. schilleriana*.



From Norman's Greenhouse

Speaker Segment January 19, 2019 Continued

Phalaenopsis tetraspis is a very interesting species that is native to the Andaman Islands, the Nicobar Islands and northwestern Sumatra. It is a warm growing epiphyte with white, glossy, fragrant flowers with red barring and/or spotting patterns. This species is a sequential bloomer that flowers during the cooler winter months and may be in bloom for periods of 4-5 months. This species is fascinating in that the spotted marking on the flowers can be highly variable from year to year, as the coloration is influenced by temperature. When the flowers first open if the temperatures are cooler the red markings will be more prominent, and as temperatures warm during the flowering period the white flower color will dominate. Some of the new strains being discovered in Asia include coerulea, green, and coffee color forms. They are currently working on crossing some of these new color forms of *Phal. tetrapsis* with *Phal. violacea* and *Phal. bellina.*

One of Norman's passions with his background in Chemistry and his major in Ornamental Horticulture from California Polytechnic State University was to develop a general all-purpose fertilizer for use on orchids. Back in the day when orchid fertilizers were first being formulated they were based on the needs of orchids that were popular in cultivation (predominantly *Cattlyea* and *Cymbidiums*) and the most common potting medium, redwood bark. Thus, the formulations developed were a 30-10-10 and a 6-30-30 solution. Today these formulations are still available but not the best fertilizers to use on orchids in Norman's opinion. The approach to developing his fertilizer formula was to test it on five common orchid genera: *Cattleya*, *Cymbidium*, *Paphiopedilum*, *Dendrobium*, and *Vandaceous*. First he tested his fertilizer on plants in vitro (in the test lab in culture media), the formula was then optimized, and field tested on plants in the greenhouse. The primary difference between his fertilizer and other commercially available brands in the consistency. His is very fine with a consistency of that of powdered sugar. This is because he uses the purest raw agricultural ingredients available to incorporate into his fertilizer mixture. Although his fertilizer is very concentrated the purity of the ingredients will not cause leaf tip burn and contains a compound of all essential major and minor nutrients that orchids need. At next month's meeting we will have 1 lb. containers of Norman's fertilizer available for purchase for $10 each. To use simply mix one teaspoon per gallon of water and use this formula to water and feed your orchids twice a month year round.

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