**Phalaenopsis – Pink & White Breeding Lines**

Early pink hybrids started with P. schilleriana and P. sanderiana for their desirable flower color. One of the first pink hybrids of note was P. Grand Conde (P. sanderiana x P. schilleriana), registered in 1929 by Vacherot & Lecoufle. These pink species were crossed with whites, such as P. aphrodite or P. amabilis hybrids, to add increased flower size and shape. A couple of the early hybrids were P. Versailles (P. rimestadiana x P. sanderiana), registered by Vacherot & Lecoufle in 1929, and P. Alger (P. aphrodite x P. sanderiana), bred and registered by the same firm in 1930. Later, P. schilleriana became the preferred parent, since its offspring produced a stronger pink color. When P. Alger was crossed to P. schilleriana, the hybrid P. Reve Rose resulted and was registered by Vacherot & Lecoufle in 1932. Phalaenopsis Clara I. Knight (P. Marmouset x P. Doris), registered in 1951, was an important step toward larger pink flowers. Pink hybrids started reaching the flower size of whites with better shape and color distribution with the introduction of hybrids such as P. Zada (P. San Songer x P. Doris), registered in 1958 by Fields Orchids; P. Bar-bara Beard (P. Virginia x P. Zada), bred and registered by C. Beard in 1962; and P. Ann Marie Beard (P. Palm Beach Rouge x P. Rozada), bred and registered by Beard in 1966. The next important advances were made by German phalaenopsis breeder Fritz Hark with several of his most notable introductions, including P. Lipperose (P. Ruby Wells x P. Zada), registered in 1968; P. Zauberrose (P. Lipperose x P. Lippezauber) in 1972; P. Abendrot (P. Lippezauber x P. Lippstadt) in 1974; P. Lippeglut (P. Lippstadt x P. Zauberrose) in 1975; and P. Lippegruss (P. Abendrot x P. Lippstadt) in 1983. Of these, P. Lippe-rose, although never garnering any flower award from the American Orchid Society and only one Award of Merit from the Royal Horticultural Society, has been a huge influence in producing newer pink hybrids, with more than 5000 progeny! This hybrid was the first in the line of pinks produced by Hark that were common referred to as "German Pinks" (although its parents were both American hybrids). In a similar timeframe, Vacherot & Lecoufle registered P. Danse (P. Romance x P. Abondance) in 1976. In 1988, some nice pinks were registered, including one with a darker pink lip, P. Ida Fukumura (P. Rose Heart x P. Mi Cha), bred and introduced by G. Fukumura.

Round, pristine-white flowers epitomize the elegance and look of the genus Phalaenopsis. The white species, P. amabilis was the first in the genus to be described. Some of the earliest white types that were grown and displayed were P. amabilis, P. aphrodite, P. sanderiana, and P. stuartiana. Though these species are beautiful, breeders sought to improve their natural form. They wanted larger, flat-ter, and rounder overlapping petals and sepals with heavier substance; flowers that were displayed and spaced better on the inflorescence; and plants that were vigorous and more floriferous. Although breeding ef-forts with white Phalaenopsis hybrids undoubtedly started, in a limited way, shortly after the species was discovered, they began in earnest in the early to mid-1900s in the United States and Europe. One of the first notable white hybrids was P. Elisa-bethae, then considered a primary hybrid between P. amabilis and P. rimestadiana (now thought to be a Australian tetraploid form of P. amabilis). It was bred by the famous French orchid firm, Vacherot & Lecoufle, and named by the firm in 1927. Although gradual improvements were made in the flower form, shape, and size for decades, one of the big-gest breakthroughs for the large whites was P. Doris, registered in 1940. Hugo Freed, noted American phalaenopsis breeder, writes glowingly about this hybrid in New Horizons in Orchid Breeding (1979) and refers to it as the "Champion of Champions and the Queen of Queens." The result of crossing two fine parents, P. Elisabethae and P. Katherine Siegwart (bred and introduced by J. W. Slotter in 1932), P. Doris was introduced by Duke Farms, named after Doris Duke, and bred by T. W. Carr. Interestingly, this gorgeous hybrid was not that far removed from its species parents, as shown in the genealogy chart. The predominant contribution of the species P. amabilis in this hybrid's background is apparent. Phalaenopsis Doris is a beauty, with 31/4 in. (8 cm) snow white flowers, but its real claim to fame is the role it played as a super parent. It is a tetraploid, with the usual advantages of double chromosomes, larger flower size, and greater substance, all of which were frequently passed on to its offspring. Its better flower substance also proved to extend the staying power of the flowers and their resistance to air pollution. As of 2007, this grex has earned 29 awards, produced more than 260 Fl offsprings, and is in the breeding background of almost 24,000 hybrids! The various grexes that further contributed to the development of modern white Phalaenopsis hybrids include P. Alice Gloria, P. Cast Iron Monarch, P. Dos Pueblos, P. Elinor Shaffer, P. Gladys Read, P. Grace Palm, P. Joseph Hampton, P. Juanita, P. Palm Beach, P. Ramona, P. Richard Shaffer, and P. Sonja. All these were registered in the 1950s to 1960s. Improvements continued with flatter, rounded, larger flowers of greater substance. One of the most prolific and successful breeders of white phalaenopsis was Keith Shaffer of Shaffer's Tropical Gardens in Capitola, California. His company was responsible for more than 400 awards for superior white hybrids. Shaffer's white hybrids also served as important parents for future hybrid development. In recent years, Taiwanese breeders have contributed their talents to creating award-winning whites, including those produced by W. H. Chen of Taiwan Sugar Company (Taisuco) such as P. Taisuco Bright, P. Taisuco Crane, P. Taisuco Kochdian, P. Taisuco Snow, P. Taisuco Swan, and P. Taisuco Windian. All these hybrids have used the grex hybrids as stepping stones and are not far removed from the old standby, P. Doris. The standard whites have now reached such perfection in size, shape, substance, and texture that it is difficult to imagine how they could be improved significantly. One of the more modern whites, P. Cygnus (P. Tokyo Bridal x P. Silky Moon), bred and introduced by Kokubunji in 1997, offers clones bearing perfectly round flowers that are almost 6 in. (15 cm) across! It seems that many breeders also believe the whites have reached their zenith, since relatively little breeding wo is being carried on with large whites. Instead, the emphasis seems to be on breeding and producing smaller flowering (11/2 to 3 in., or 3.5 to 7.5 cm) multiflora whites (20 to 40 flowers) on compact-growing plants, by combining the multiflowering characteristics of white forms of P. equestris and P. stuartiana with classic whites such as P. Doris and newer hybrid whites. Some of the stars in this group are P. Be Glad, P. Brother Amar, P. Cassandra, P. Ho's Amaglad, and P. Timothy Christopher.2

Judging White Phalaenopsis

Several standards are used by orchid judges for discerning the "perfect" white phalaenopsis flower. These guidelines hold true for most of the other "standard" or large-flowered hybrids.

Form: Flowers of full, round shape with smooth edges. Dorsal sepal should be broader than the lateral se-pals, and the space between the sepals should be filled with the petals. Size: The hybrid should have flowers at least as large as its parents. It is interesting to note that flower size used to mean everything to the judges, but as the flowers got larger, in general, the orchid's flower count got lower. Today, flower count has become at least as important as flower size. Substance: As with size, the substance (the thickness of the petals and dorsals) should be at least as good as its parents. Thicker substance usually translates to longer flower life and is a desirable quality.

Texture: Smooth, crystalline texture of the surface of the flowers is most desirable. Habit of inflorescence: The inflorescence (flower spike) should be vertical and then gracefully arch forward and downward. Number of flowers and buds: The hybrid should have a flower count equal to or greater than what could be expected from its parents. In general, the more flowers the better. A relationship exists between the number and size of flowers. Usually, a smaller flowering hybrid is expected to be more floriferous than a hybrid with very large flowers. For a standard white to be judged a winner, it usually needs to have a spread of about 5 in. (13 cm) with about a dozen flowers on the inflorescence. Arrangement: Judges look for flowers to be spaced well on the inflorescence with no hidden blooms.2

A review of Phalaenopsis awards on the last few years indicates the majority of awards are going to plants of Section Amboinensis, particularly P violacea and P bellina. The latest standard pink awarded is Phal schilleriana ‘Jane’ in March of 2020. The latest large white awarded was Phal aphrodite ‘Huron’ in April 2019. The breeding trends seem to have shifted to smaller, compact, colorful Phalaenopsis although the nearly perfect large whites will probably always be with us.

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