New Paphiopedilums

A Critical Overview of the Last 10 Years

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ABOVE *Paphiopedilum ooii*, described in 1999, is one of several exciting additions to the genus. This large plant, with impressive inflorescences up to 6½ feet (2 m) high, is native to Malaysia.

OPPOSITE *Paphiopedilum sugiyamanum* is said to have been collected in Sabah or Borneo and cultivated in a commercial nursery in Japan.

PAPHIOPEDILUMS — THE SLIPPER orchids — have been popular for more than 150 years. The discovery of new species has made fortunes for some nurseries. Indeed, the rediscovery of *Paphiopedilum fairrieanum* is said to have saved Sander's, one of the most famous orchid nurseries, from ruin. Veitch, Sander's, Low's and Linden rivaled each other for new discoveries, and the decrease in the rate of new introductions around 1900 also marked the decline of these nurseries.

The discoveries of *Paphiopedilum delenatii* (1913–1914) and *Paphiopedilum wardii* (1922) were important, but nothing compared with the golden age of slipper-orchid mania when *Paphiopedilum rothschildianum* and *Paphiopedilum sanderianum* were found during the last quarter of the 19th century. Even the discovery of *Paphiopedilum papuanum* in 1915 passed almost unnoticed. It was to take many more decades and a medical doctor who served as editor of *Orchid Digest* to rekindle interest in the genus among orchid enthusiasts. Indeed, if there were a prize for popularizing slipper orchids, few could disagree with the selection of Jack Fowlie, MD, as the first laureate. Sadly, Fowlie would not be alive to receive this award.

In the wake of Fowlie's articles in *Orchid Digest*, many new species have been described. This article deals with descriptions at the species level that have occurred during the last 10 years. Some of this has been discussed in the new monograph *Paphiopedilum* (Braem and Chiron, 2003), but limitations set by the publisher did not allow for a detailed treatise of all new taxa. Therefore, this article may, in certain respects, be regarded as a preliminary addendum to the book. For some taxa, the text of this article is an extract of the corresponding text in the book.

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***Paphiopedilum aestivum* Liu and Zhang**
Acta Phytotaxonomica Sinica 39(6):568–570. 2001.

The description in the original publication and the accompanying illustration leave no doubt that *Paphiopedilum aestivum* should be regarded as a geographical variant of *Paphiopedilum purpuratum*. The differentiation of species by "flowering time," "clear lateral veins on the upper side of leaves," and "horizontally spreading dorsal sepal" (meaning that the dorsal is bent forward over the pouch) does not withstand scientific scrutiny or warrant recognizing *Paph. aestivum* as a separate species.

***Paphiopedilum anitum* Golamco**
Waling Waling Review 6(2):9–14. 1998.

This is undoubtedly an extremely close relative of *Paphiopedilum adductum*. Therefore, some people may prefer to argue for recognizing the two as subspecies or varieties of a single species, while others will find the two entities different enough from each other and consider them separate species. However, Chiron and I agree that there are good arguments for both interpretations.

The plants were allegedly collected on the Philippine Island of Mindanao. Danilo A. Tiu, a Philippine orchid specialist, originally identified them as *Paphiopedilum adductum* subspecies *anitum,* but no corresponding publication could hitherto be found. Andres S. Golamco Jr. described the taxon as an autonomous species in the journal of the Philippine Orchid Society (*loc. cit.*). He differentiates between *Paph. adductum* and *Paph. anitum*

based on habitat conditions, flower color and size, and flowering season. The differences in location (eastern vs. northern Mindanao), elevation (722–3,281 feet vs. 4,101–4,429 feet [220–1,000 m vs. 1,250–1,350 m]), and habitat condition ("very shady with trees 40–60 feet tall on heavy rock formations and on banks topped with leaf, twig and bark detritus mulch" vs. "medium bright, grassy area with short trees 20–25 feet tall on fine river rock and sand mixed with humus and plant mulch") do not warrant the differentiation between two separate species, nor do the differences in humidity (80 to 100 percent vs. 75 to 80 percent) or the blooming season (April to September vs. year round).

The plants designated as *Paph. anitum* are much larger than those designated as *Paph. adductum,* in respect to both the leaves and the inflorescence and flowers. This again is by itself not enough to separate the two *Paphiopedilum* species. Neither is the number of flowers produced, as that feature depends on habitat or cultural aspects.

Thus, we are left with a distinct difference in the color of the flower and some subjective differences in the shape of some of the flower parts. Much has been said about flower color, and there is no disagreement that this characteristic is rather variable in most species within the genus. Thus, the color of *Paph. anitum* does not warrant its treatment as a separate species, and the same must be said for the slight variations that can be deduced from the shape of the petals and sepals and the staminode.

However, all of these slight differences, as well as those of overall plant size, and size and color of the flower, do give *Paph. anitum* a unique look (especially when the petals cross below the pouch) and make it stand out against plants designated as *Paph. adductum.* This difference is distinct. Most, if not all, commercial growers will undoubtedly regard the taxon as a separate species. From the point of view of scientists and, depending on what weight one might apply to the various differences, *Paph. anitum* may best be regarded as a subspecies or a variety of *Paph. adductum.*

***Paphiopedilum brevilabium* Liu and Zhang**

Acta Phytotaxonomica Sinica 39(6):562–567. 2001.

Paphiopedilum brevilabium is based on a nursery-cultivated plant of dubious origin. However, *Paph. brevilabium* is nothing but a normal *Paphiopedilum wardii* with "free" lateral sepals. Indeed, the lateral sepals of this entity are not fused to a synsepal as is the rule in *Paphiopedilum.* This type of malformation has been observed repeatedly in species in which the lateral sepals are generally united into a synsepalum. This condition may or may not be stable within the given plant. It could well be that the type specimen (now dried) would have produced normal flowers during a subsequent flowering period.

***Paphiopedilum burmanicum* Zhang and Liu**

Acta Phytotaxonomica Sinica 39(6):562–567. 2001.

This can be separated from *Paph. wardii* by a nontessellated upper leaf surface and a "subovate pouch." It is known that leaf tessellation can differ within species (*Paphiopedilum sukhakulii, Paphiopedilum purpuratum, Paphiopedilum emersonii*). Nontessellated forms of *Paphiopedilum chamberlainianum* and *Paphiopedilum liemianum,* for example, are also documented. *Paphiopedilum burmanicum* and *Paphiopedilum brevilabium*, which was described in the same article, are based on nursery-grown plants of dubious origin.

***Paphiopedilum cerveranum* Braem**

Orchidées. Culture et Protection, No. 38: 28–30. 1999.

Paphiopedilum cerveranum has been misinterpreted as *Paphiopedilum robinsonii* (Ridley) Ridley by most authors (Van Delden, 1968; Fowlie, 1974; Karasawa, 1986; Braem, 1988 and 1998; Koopowitz, 1995).

The staminodal shield of the plant now referred to as *Paph. cerveranum* has no indentation, but instead has a protruding boss at the apical margin, and thus does not fall within the variability of either *Paphiopedilum appletonianum* or *Paphiopedilum bullenianum.* The morphology of the staminode does not correspond with the original description of *Paph. robinsonii,* where Ridley clearly states that the anther (staminode) is "widely emarginate at the tip [= apex]." Neither does this plant correspond to the type specimen of *Paph. robinsonii.* Cribb (2003) considers this taxon to be a possible hybrid between *Paphiopedilum bullenianum* and another species, possibly *Paphiopedilum hookerae*, but no evidence is given to back this theory.

Several clones of this taxon are known and in cultivation, and numerous specimens have been studied over the last 15 years. Two groups of the cultivated plants examined were undoubtedly collected in the wild. The exact locality of the collection of the type specimen has not been disclosed (to protect the habitat), which is described as extensive (De Raeve, pers. com.). Plants matching the description of *Paph. cerveranum* were also found by L. Averyanov in Vietnam.

The taxon was named in honor of Frank Cervera, a slipper-orchid enthusiast from Yonkers, New York.

***Paphiopedilum coccineum* Perner and Herrmann**

Die Orchidee 51(5): 622–624. 2000.

Braem and Chiron included *Paphiopedilum coccineum* in their new monographic treatment of the genus with a fair amount of skepticism in respect to its correct taxonomic status. The plant was described on the basis of a specimen seen in culture belonging to a Vietnamese orchid amateur who claimed to have collected the plant in the Cao Bang district of northern Vietnam. The plants were being cultivated under the designation of "red *Paph. helenae*," a name that clearly illustrates the affinity to *Paph. barbigerum* and *Paph. helenae.* Perner and Herrmann maintain that *Paph. coccineum* is by no means a link between the two species mentioned. In this respect, we tend to agree with them. Nonetheless, if it were not for the difference in staminodal shield morphology, we would not hesitate to agree with the classification of this plant as *Paphiopedilum barbigerum* var. *lockianum* as published by Averyanov (2002).

The shape of the staminodal shield of *Paph. coccineum,* however, corresponds with that of *Paph. herrmannii.* Also, the distinctly margined dorsal sepal and petals are reminiscent of the same morphological characteristics in that species. We will have to wait until the karyotypes (shape of chromosomes) of *Paph. herrmannii* and *Paph. coccineum* have been examined to say anything conclusive about the correct taxonomic status of this taxon.

It was named *coccineum* for the red suffusion of the central area of the dorsal sepal.

Paphiopedilum crossii Braem and Senghas

Sida 19(2):249–255. 2000.

Hitherto, all authors have addressed this taxon as *Paphiopedilum callosum.* A detailed review of all the pertinent literature, however, revealed that the publication of the taxon as *Cypripedium crossii* Morren takes priority over the publication as *Cypripedium callosum* by the younger Reichenbach. Morren published his concept of *Cyp. crossii* in 1865. Morren (1865) writes that the plant originated from Peru and was discovered there by Mr. Cross. An excellent color plate, however, accompanies the note. That illustration leaves not a trace of doubt that the concept of *Cyp. crossii* is absolutely identical with Reichenbach's concept of *Cyp. callosum* published 21 years later. As the Morren publication, no matter how short and incorrect the text may be, is accompanied by an illustration from which the various characteristics of the plant can be distinctly identified, the name *Cyp. crossii* is by no means to be regarded as a *nomen nudum* (a name that is used in literature without having been validly published). For a detailed discussion, see the new monograph by Braem and Chiron (2003).

Paphiopedilum crossii was discovered in Siam (now Thailand) and brought to Europe by the French collector Alexandre Regnier. He also sent material to Reichenbach f., who described it as *Cyp. callosum*, overlooking or ignoring the earlier publications of Morren.

Paphiopedilum crossii is closely related to *Paph. barbatum* and has been described as a variety of that latter species. It differs from the latter by its larger dorsal sepal, its longer, subsigmoid petals that are pendent or nearly so and by its chromosome count.

Cypripedium crossii Morren is not to be confused with *Paphiopedilum* Crossianum (described as *Cyp.* Crossianum by Reichenbach f. in 1873). The latter concept represents an artificial hybrid between *Paph. insigne* and *Paph. venustum.*

Paphiopedilum delicatum Liu and Zhang

Acta Phytotaxonomica Sinica 39(1):78–80. 2001.

Liu and Chen "discovered" this taxon among the paphiopedilums cultivated at the Shenzhen City Wutonshan Nurseries. *Paphiopedilum*

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TOP LEFT *Paphiopedilum crossii* var. *thailandense,* awarded as *Paph. callosum* var. *thailandense alba.* This cultivar is 'Dee Dee's Alba Gem', HCC/AOS. Grower: Dee Dee Flores.

TOP RIGHT *Paphiopedilum crossii*, awarded as *Paph. callosum*. This cultivar is 'Crooked Crest', HCC/AOS. Grower: Rick Hepler.

ABOVE This specimen of *Paphiopedilum crossii* fma. *viniferum* was awarded as *Paph. callosum* var. *viniferum* 'Bo-Jac', HCC/AOS. Grower: Harold Koopowitz, PhD.

delicatum is, in all respects, fully identical with *Paph. helenae* (see below). At most, one could argue that *Paph. delicatum* is a color variant of the latter species.

Paphiopedilum densissimum Liu and Chen

Acta Phytotaxonomica Sinica 40(3):283–285. 2002.

Paphiopedilum densissimum is a variant of *Paph. villosum.* The plant differs from the normal forms of the species merely by the dense hairiness of the shaft of the inflorescence, the ovary and the outer surface of the sepals. There is no structural difference from *Paph. villosum.* Again, the type specimen was selected from commercial culture and was transferred into a dried herbarium specimen. According to the authors, a total of five plants showed the hairiness.

Paphiopedilum dixlerianum Braem and Chiron

Richardiana 1(4):135–139. 2001.

Paphiopedilum dixlerianum was discovered in the spring of 1997 in Myanmar (Burma). Undoubtedly, it is closely related to *Paph. sukhakulii,* and on first sight, some may be tempted to consider the plant a variety of the latter species, which is well known from northern Thailand. *Paphiopedilum dixlerianum,* however, differs from *Paph. sukhakulii* by its column structure and its overall phenotype (visual expression of the genotype).

The taxon was named in honor of Rosalie and Joe Dixler, of Highland Park, Illinois.

Paphiopedilum gigantifolium Braem, Baker and Baker

Orchidées. Culture et Protection, No. 39:5–12. 1997.

Paphiopedilum gigantifolium did not reach the European market until the spring of 1997 in an importation from Sulawesi Island. The plants were allegedly collected in January of that year. The species was published by Braem, Baker and Baker in the French Journal *Orchidées: Culture et Protection* on May 14, 1997. In August 1997, Ayub Parnata, a nurseryman based in Bandung, Java, published an article in the *Australian Orchid Review* (Parnata, 1997), proposing his name for the species. Cribb (1997) suggests that the original publication by Braem, Baker and Baker is invalid because "their Latin diagnosis is inadequate to validate the name." However, the publication abides by all pertinent rules

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and delineation of the *International Code of Botanical Nomenclature*, and the Latin diagnosis, although not elaborate, is adequate to fulfill the requirements set by that *Code*. The later Australian publication, on the other hand, lacks several aspects of valid publication (no Latin diagnosis, no type designation), and must, therefore, be treated as a horticultural mention without taxonomic importance.

Paphiopedilum gigantifolium is closely related to *Paph. supardii* and *Paph. rothschildianum,* but *Paph. gigantifolium* is characterized by the enormous dimensions of the adult leaves (and therefore named "*gigantifolium*"). In addition, it is unique in a number of floral characteristics, especially the curiously reflexed petals, the position of the dorsal sepal, and the morphology of the staminode and staminodal shield, as well as the white ovary, which it shares only with *Paph. sanderianum.*

Paphiopedilum globulosum Liu and Chen

Acta Phytotaxonomica Sinica 40(4):364–370. 2002.

This is another discovery out of the Shenzchen City Wutonshan Nurseries. The taxon was described within an article entitled "Additional Notes on the Subgenus *Brachypetalum* (*s.l.*) of *Paphiopedilum*."

The plant is said to differ from *Paph. micranthum* by much broader leaves, a smaller labellum and an enormous oblong-elliptic staminodal shield. Although I question the validity of this taxon at the species level, I reserve judgment on its proper taxonomic status until I have examined live materials. The dimensions of the leaves and the size of the labellum are not to be considered good criteria for a differentiation from *Paph. micranthum* as that species is extremely variable. Unfortunately, no information about the texture of the leaves has been made available. The morphology of the staminodal shield is indeed different from what one would expect within *Paph. micranthum.* Hybrid status cannot be excluded.

Paphiopedilum helenae Averyanov

Botanical Journal (St. Petersburg, Russia) 81(9):108. 1996.

Paphiopedilum helenae is a fairly recent discovery. Many greeted the description with a fair amount of skepticism, and some have regarded this plant as a variety of *Paph. barbigerum. Paphiopedilum helenae,* however, is now generally considered a good species, differing from the former by the subcircular form of the staminodal shield, the straight (not undulate) petals, its flower color and the much smaller plant size. (One should, however, note that plants of *Paph. barbigerum* can also be small.)

The taxon was named in honor of Helena Averyanova.

Paphiopedilum herrmannii Fuchs and Reisinger

Linzer biologische Beiträge 27(2):1213–1215. 1995.

This taxon is based on a plant that was found among a batch of plants labeled as *Paphiopedilum esquirolei* at the Municipal Botanic Gardens of Linz, Austria. The plants were reportedly collected in Vietnam by Czech botanists in 1985. This new species belongs in section *Paphiopedilum* (single-flowered inflorescence, plain unmottled leaves) and, although the original authors place it next to *Paph. henryanum,* the affinity with *Paph. insigne* seems to be even more evident. The overall flower form and the staminodal plate are similar to the analogous characters found in

Paph. insigne, whereas the affinity to *Paph. henryanum* is indicated by the color of the lip. Hitherto, there was a tendency to consider *Paph. herrmannii* as a hybrid between *Paph. henryanum* and a member of the *Paph. insigne* complex.

I have studied a considerable number of wild-collected plants of *Paph. herrmannii.* These observations indicate that *Paph. herrmannii* has fairly recently developed as a natural hybrid. Although there is little or no variation in the leaf morphology, the flowers differ to a large extent with variation in nearly all flower parts. Most distinct are the color variation on the marginal area of the dorsal sepal, the difference in staminodal shape, and the color of the protuberance on the shield. Obviously, the population of *Paph. herrmannii* has stabilized, the best indication of this being the relatively large numbers available on the markets of Vietnam.

Paphiopedilum herrmannii was named for Rolf Herrmann, an orchid hobbyist in Neuss, Germany.

***Paphiopedilum intaniae* Cavestro**
Rhône-Alpes Orchidées 25:2. 2000.

This is one of the taxa whose provenance raised serious doubts about its true identity. The plant is obviously to be situated within subgenus *Polyantha,* possibly within the vicinity of *Paphiopedilum philippinense.* In my opinion, the taxon represents a hybrid of *Paph. philippinense.* The form of the staminode may indicate the presence of *Paph. parishii* or *Paph. dianthum* in the cross. Although I realize how difficult it is to prove hybrid origin for this taxon, I suggest a study of the karyotypes of the different species that may be involved. The plant originates from an Indonesian nursery. It was allegedly discovered on the island of Sulawesi.

***Paphiopedilum microchilum* Liu and Chen**
Acta Phytotaxonomica Sinica 39(2):156–159. 2001.

Paphiopedilum microchilum is another of the plants cultivated in the Shenzchen City Wutonshan Nurseries that were "selected" as new species. The type specimen (now deposited as dried material) had all of the characteristics of *Paph. wardii,* with the exception of a malformed pouch.

***Paphiopedilum multifolium* Liu and Zhang**
Acta Botanica Yunnanica 24(2):191–192. 2001.

Paphiopedilum multifolium is fully identical with *Paph. wardii* and is to be regarded as a synonym thereof.

***Paphiopedilum ooii* Koopowitz**
Orchid Digest 63(2):106–107. 1999.

Paphiopedilum ooii is one of several exciting additions to the genus described in 1999. Although the flower of this species may not be the most spectacular, it is definitely one of the largest plants within the genus. The leaves can be up to 28 inches long × 2¾ inches wide (70 cm × 7 cm) and the inflorescence up to 6½ feet (2 m) high. As but few specimens have been brought into cultivation, nothing more is known about this species beyond what is to be found in the original description and what has become known through the few people who have seen the plant in flower in Malaysia.

Paphiopedilum ooii belongs within subgenus *Polyantha.* Koopowitz compares it with *Paph. glanduliferum* (meaning *Paph. praestans*) but conclusive statements about the relationship between *Paph. ooii* and the other species of the subgenus must wait until further information becomes available.

***Paphiopedilum parnatanum* Cavestro**
Orchidées. Culture et Protection, No. 38:30. 1999.

Paphiopedilum parnatanum is without any doubt an artificial hybrid. The plant is said to have been collected in the Philippines and reached Western cultivation via the Indonesian nursery of Mr. A.S. Parnata. The morphology of the flowers suggests that *Paph. sukhakulii* is one of the parents.

***Paphiopedilum platyphyllum* Gruss**
Die Orchidee 52(1): 84–87. 2001.

This taxon is generally known under the name *Paphiopedilum stonei* var. *latifolium.* According to Gruss (*loc. cit.*), it was discovered by Toyoshima on April 26, 1964, in Sarawak on the island of Borneo. Quené (2003) states that it was discovered by Dr. Yoshishige Tachibana at an elevation of 2,600 feet (800 m) near the summit of Bukit Kana. According to the Quené report, Tachibana found a population of about 30 plants and collected 20. Fifteen of the plants were passed on to Fumimasa Sugiyama of Yamata-Noen Orchids who, some years later, sent a division to Norwood Schaffer in Baltimore, Maryland. The plant was passed on to Professor George Kennedy, a California geologist who coined the name "*Paphiopedilum stonei* var. *latifolium*" and obtained an award from the American Orchid Society ('Ruth Kennedy', HCC/AOS).

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OPPOSITE LEFT *Paphiopedilum helenae,* named in honor of Helena Averyanova, is a fairly recent discovery.
OPPOSITE RIGHT *Paphiopedilum gigantifolium* shows affinities to *Paphiopedilum supardii* and *Paphiopedilum rothschildianum.*
ABOVE The author suggests that *Paphiopedilum intaniae,* which was allegedly discovered on Sulawesi, is most likely a hybrid.

For many years, insiders suggested that the plant was nothing but an artificial hybrid of *Paph. stonei* and an undisclosed second parent. All plants known to be in cultivation are divisions of the plant awarded in the United States under the clonal designation 'Ruth Kennedy', HCC/AOS. According to Gruss (*loc. cit.*), Yukawa studied the macromolecular characteristics and reported, "the nuclear and plastid DNA markers show a great similarity to those of *P. stonei, P. kolopakingii,* and *P. supardii.*"

Unfortunately, neither the publication of Gruss nor the elaborate and well-illustrated article by Quené goes beyond assumptions based on hearsay. Not only does neither article present any data that could be used to help solve the enigma of this plant's identity, but the fact that Gruss as well as Quené fail to present such evidence

nourishes the doubts about the validity of this taxon at the species level.

The epithet *platyphyllum* refers to the extreme width of the leaves.

***Paphiopedilum puberulum* Lei and Zhang**

Acta Botanica Yunnanica 24(3):309–310. 2002.

Paphiopedilum puberulum is said to have originated from northern Vietnam near the border with China. It was cultivated at the Shenzchen City Wutonshan Nurseries. The plant corresponds in all respects to *Paph. cerveranum* (see above).

***Paphiopedilum rhizomatosum* Chen and Liu**

Journal of Wuhan Botanical Research 20(1):12–13. 2002.

The plant was first described by Olaf Gruss (2001) as the natural hybrid between *Paph. barbigerum* and *Paph. villosum* and given the name *Paphiopedilum ×areeanum*. His concept and that of *Paph. rhizomatosum* are identical. Whereas Gruss indicates that "his" specimen came from the Chinese province of Yunnan, Chen and Liu claim their plant to originate from northern Myanmar, but those areas border each other. However, from both publications, it can be assumed that all authors ignore the true provenance of "their" plant.

Although not common, the rhizomatous habit is not extremely rare in paphiopedilums and is without doubt a result of cultural conditions.

The recent publication of *Paphiopedilum vejvarutianum* has added another name to this species complex. Indeed, this latest concept is based on plants said to originate from Thailand, which are fully identical with the plants described under the names of *Paph. ×areeanum* and *Paph. rhizomatosum.*

***Paphiopedilum sugiyamanum* Cavestro**

Rhône-Alpes Orchidées 27:2–9. 2001.

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No difference between the concept of *Paph. sugiyamanum* and *Paph. hennisianum* can be detected. The plant of *Paph. sugiyamanum*, however, is said to have been collected in Sabah on Borneo. It was cultivated in a commercial nursery in Japan. *Paphiopedilum hennisianum,* on the other hand, is a native of the Philippines. The description by Cavestro was based on secondhand information that may have been erroneous.

***Paphiopedilum tranlienianum* Gruss and Perner**

Caesiana 7(11):63–73. 1998.

Paphiopedilum tranlienianum, discovered by Mrs. Tran Ngo Lien in northern Vietnam, was imported into Germany by Gruss and Perner. It has plain, unmottled green leaves, a single-flowered inflorescence, and well-developed lateral auricles on the upper margin of the main lobe of the labellum; thus, it obviously belongs in subgenus *Paphiopedilum*, although its petals do not widen toward the apex as in the other plants of the group.

Although Gruss and Perner described the plant at the species level, it has been postulated that *Paph. tranlienianum* is a natural hybrid between *Paph. hirsutissimum* and *Paph. helenae,* but little evidence is available to substantiate this hypothesis. If it is a hybrid, the strongly undulate petals may be the only indication of a possible influence by *Paph. hirsutissimum.*

As *Paph. tranlienianum* is obviously related to all taxa of the *Paph. insigne* complex, it is natural that it has certain features in common with other plants of that group, and it is possible that other similarities will be found in the gene pools of these taxa. The taxon was also published as *Paph. caobangense* (Tich, 1999). That publication is invalid, however, as there was no Latin description, diagnosis or appropriate type citation.

***Paphiopedilum vejvarutianum* Gruss and Roellke**

Die Orchidee 54(1):56–63. 2003.

See *Paph. rhizomatosum* (above) for a discussion of this taxon.

***Paphiopedilum vietnamense* Gruss and Perner**

Die Orchidee Beiheft 5:3–8. 1999.

This new species was published three times within six weeks. The publication of *Paphiopedilum vietnamense* by Gruss and Perner dates from January 11, 1999. It was followed by the publication of the same concept as *Paphiopedilum hilmari* by Senghas and Schettler (1999) on January 19, and the publication as *Paphiopedilum mirabile* was effected by Cavestro and Chiron (1999) on February 19. Thus, according to the rule of priority, the name used in the publication of Gruss and Perner is to be accepted as the valid designation.

Paphiopedilum vietnamense finds its place within subgenus *Parvisepalum*. On the basis of its flower color and the country of origin, it has been described as closely related to *Paph. delenatii* by Gruss and Perner (*loc. cit.*) as well as by Senghas and Schettler (*loc. cit.*) and Cavestro and Chiron (*loc. cit.*). However, the size and shape of the flower, as well as the leaf texture, are totally different. Until more plants have been studied, definite comments regarding the final taxonomic affinity of this plant and its proper place within

LINKS

http://retirees.uwaterloo.ca/~jerry/orchids/cnotes/paph2.html

From the Orchid House Web site, "A Beginner's View of Paphiopedilum Culture," by Philip F. Wight, provides a comprehensive overview of the growing requirements for the slipper orchids, as well as a useful breakdown of the more commonly seen species into their respective sections and those sections' differing climactic conditions in their native habitats. This arrangement will assist growers in their understanding of what the cultural needs of those plants might be in captivity.

http://www.geocities.com/RainForest/Wetlands/3437/index2.html

Slipper-Web, the Slipper Orchid Photo Gallery, features a photographic fix for *Paphiopedilum* addicts. Follow the "Paph." page links at the bottom of each page to see lots of lovely photographs by Chuck Acker and Allen Black showcasing many species and a few hybrids as well. On the species photograph pages, be sure to click each thumbnail to view the full-sized image.

the genus *Paphiopedilum* seem to be inappropriate.

Before long, the chromosome number will be established and the karyotype will be available for comparison. Because of its flower color, it will most definitely soon be used in hybridization. Its qualities in that respect remain to be seen. As a species, however, *Paph. vietnamense* is undoubtedly one of the most beautiful orchids known.

The species was given the specific epithet *vietnamense* as an indication of the country of origin of the type specimen. However, experience has shown that the distribution of the taxon may not be limited to that country.

Paphiopedilum viniferum **Koopowitz and Hasegawa**

Orchid Digest 64(4):148–151. 2000.

The taxon known under the name *Paphiopedilum callosum* 'Bo-Jac', HCC/AOS, has deeply vini- (wine-) colored flowers with dark spotting on the petals. It was found by the California nurseryman Norris Powell, who was visiting a nursery in the Netherlands. A similar plant was known as *Paph. callosum* 'Ebon' but this plant, which was cultivated by Emerson "Doc" Charles, had its petals borne at an angle of about 45 degrees from the horizontal. Another plant, cultivated in Japan by Mr. Muramatsu, has similar flower color and has been given the cultivar name 'Quintessense'.

The correct provenance of these three clones has never been disclosed. These clones were recently elevated to species status and named *Paph. viniferum* (*loc. cit.*), as presented by Koopowitz and Hasegawa. However, basing a taxon at the species level on "pattern and placement" of the petal spots and on the overall flower color cannot survive scientific scrutiny. The plants are best regarded as a dark-red color form of *Paph. crossii.* Recently, Braem and Chiron (2003) transferred the taxon to *Paph. crossii* fma. *viniferum*.

Paphiopedilum wenshanense **Liu and Zhang**

Acta Botanica Yunnanica 22(4):390–394. 2000.

In the mid 1980s, plants that showed distinctly intermediate characteristics between *Paph. concolor* and *Paph. bellatulum* were imported into Europe. They came via Hong Kong nurseries and were brought into cultivation as *Paphiopedilum conco-bellatulum*. In spite of the fact that the wild-collected plants are identical with the garden hybrid between *Paph. concolor* and *Paph. bellatulum,* registered by Heath and Son as *Paphiopedilum* Conco-bellatulum in 1891, the entity was recently published as a species under the designation of *Paph. wenshanense*. This, of course, causes a serious problem. The wild-collected plants are to be addressed as *Paph. wenshanense,* whereas the garden hybrid is to be correctly addressed as *Paph.* Conco-bellatulum. However, the differentiation between wild-collected plants and artificial hybrid plants will become increasingly problematic.

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OPPOSITE *Paphiopedilum tranlienianum*, described as a species, could also be a natural hybrid between *Paph. hirsutissimum* and *Paph. helenae*.

ABOVE *Paphiopedilum vietnamense* is placed within *Paphiopedilum* section *Parvisepalum*, which also contains *Paphiopedilum delenatii*, to which *Paph. vietnamense* is related.

CONCLUSION It is evident that the description of new taxa within the last 10 years has taken an inflationary tendency. This could have been predicted, as experience shows that the number of taxa described for any given orchid genus is, in general, directly proportional to the commercial potential of that genus. This was the case for *Phalaenopsis* species some decades ago and has been observed in *Paphiopedilum* since the early 1970s.

Of course, with the end of the hostile activities in Indo-China and the somewhat more liberal policies in China, the possibilities for botanists and plant collectors were considerably enhanced. It is not surprising that two countries (China and Vietnam) that were inaccessible for decades yield new taxa. And it is not surprising that botanists and horticulturists of countries not allowing free science for a long time now feel the urge to name as many species as possible. This is legitimate. It should, however, not lead to taxonomic chaos.

Of the 28 taxa discussed in this article, only eight (*Paph. cerveranum, Paph. crossii, Paph. dixlerianum, Paph. gigantifolium, Paph. helenae, Paph. ooii, Paph. tranlienianum* and *Paph. vietnamense*) can be accepted as absolutely valid. Another five (*Paph. anitum, Paph. coccineum, Paph. platyphyllum, Paph. wenshanense* and *Paph. viniferum*) deserve further discussion.

Today, interest in *Paphiopedilum* species is high: new species continue to spark discussion among slipper-orchid enthusiasts and areas long closed to exploration are opening. Jack Fowlie would be delighted.

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A Passion for Paphiopedilums

Jack Fowlie, MD's, Lifelong Dedication to Studying Slipper Orchids

COURTESY E. HETHERINGTON

ABOVE Jack Fowlie, MD (left), during a trip to Brazil.

IT is difficult to write of a brilliant, complex, creative and driving person such as Jack Fowlie, MD (1929–1993), from a first-person perspective. Fortunately, those who knew and traveled with him have their own experiences. To these I will add my recollections of having known and worked with Jack personally and as chairman of publications of the Orchid Digest Corporation for close to 30 years.

Jack was a family physician with a busy practice when he was not traveling. He loved to talk about orchids and his travels, and he was never reluctant to give medical advice when on a trip or with orchid friends. Jack and his wife, Beryl, had two children — Jack Jr., a petroleum geologist, and daughter Karen. Beryl was always a gracious hostess during the many times publications meetings were held in the Fowlie home. Typical of his way of doing things, Jack built his family home on a mountainside that had to be carved out for a home site. On a clear day, you could see the Pacific Ocean 40 miles (64 km) away over the towers of Los Angeles.

Jack was determined to explore difficult and remote regions where he could study and collect orchid species. He knew well Brazil, China, Southeast Asia, as well as other parts of the world. All of the orchids he collected were given to the Orchid Department of the Los Angeles Arboretum in Arcadia, California. He did not grow any orchids on his own nor did he collect more than a few plants of any species.

Jack's most valuable and lasting contribution to the orchid world was his excellent photography and his ability to write of his travels and of the species he

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Guido Braem, PhD, obtained a diploma in Clinical Chemistry and Pharmaceutical Technology in Brussels (Belgium), a BSc in Biology in Giessen (Germany) and a PhD in Plant Biology in Newcastle upon Tyne (England). He is well known for several orchid books, including the recently published Paphiopedilum *(with Guy Chiron), and about 125 scientific articles. Naunheimer Str. 17, D-35633, Germany (e-mail braem@onlinehome.de).*

ROBERT S. YAMATO

ABOVE *Paphiopedilum* Conco-bellatulum 'Spotted Moon', AM/AOS (*concolor* × *bellatulum*). Grower: Yamato-Noen Orchids, Ltd.

observed. His 10-part Chinese series published in *Orchid Digest*, titled, "China: Awash in the Bitter Sea," is a classic worthy of being reprinted as a book.

Typical of his extraordinary interest and drive, prior to his interest in orchid species he wrote and published a hardbound book, *The Snakes of Arizona*, in 1965. It is a fascinating study, though I doubt that many orchid fanciers would say they must see or have it. In it, he quotes Darwin on the evolution of species, which does apply to all living species, plants or animals.

Frank Fordyce, as well as "Red" Marsh and his wife Trudi, were good friends of Jack and traveled frequently with him. These Californians say about Jack, "Many times we said 'thank you' for allowing us to travel with him on botanical trips, though not nearly often enough. These experiences far surpassed anything we could have had from a travel agent. He corresponded prolifically with people all over the world, who could help him find any number of orchids that had been lost after their first discovery as much as 100 years before. We have been with him three times in Brazil, and other times to Sabah (Borneo), Java, Sumatra, Sarawak, the Philippines, Lantau Island, (Hong Kong). He constantly practiced the language of countries he was going to visit. We feared for his life."

Carl L. Withner, PhD, of Blaine Washington, says, "Jack made me feel right at home with his fieldtrip travel accounts and the somewhat monographic treatment of first one genus and then another that were published from time to time. Jack was always generous in his help."

Earl Ross, curator of orchids (retired), Los Angeles County Arboretum and Botanical Garden, in Arcadia, California, adds, "I traveled with him on about 10 different trips, seven to Asia and three to Brazil. They could be exciting, interesting, informative and chaotic. You never knew what you were going to encounter when you traveled with Jack. He had a very rigid itinerary. In Borneo, searching for *Paphiopedilum sanderianum,* we spent a couple of days in a dugout going up river, a couple of nights in the jungle in torrential rains and over limestone crags. Jack never gave up."

Even Jack's son had something to say about his father: "My father was detained at one time in a part of China closed to non-Chinese and the 'foreign devil.' He used my experiences as a petroleum geologist to claim that he was born of missionary parents in Korla in prerevolutionary China on the edge of the great Taklamakan Desert. As a result of his birthright, this made him Chinese. My father used my business cards printed in Chinese. On occasion, Jack dyed his hair jet black and, of course, spoke Chinese."

In addition to editing *Orchid Digest*, Fowlie wrote two beautifully illustrated books that he personally published: *The Genus Lycaste* (1970) and then *The Brazilian Bifoliate Cattleyas and Their Color Varieties* (1977).

The prologue to *The Men Who Don't Fit In* by Robert W. Service was read at Jack's memorial service. The passage describes him well. It reads:

There's a race of men who don't fit in,
A race that can't stand still;
So they break the hearts of kith and kin,
And they roam the world at will,
They range the field and they rove the flood,
And they climb the mountain's crest,
Theirs is the curse of the gypsy's blood,
And they don't know how to rest.

Ernest Hetherington is an honorary vice president of the American Orchid Society. 845 Kingsley Drive, Arcadia, California 91007.

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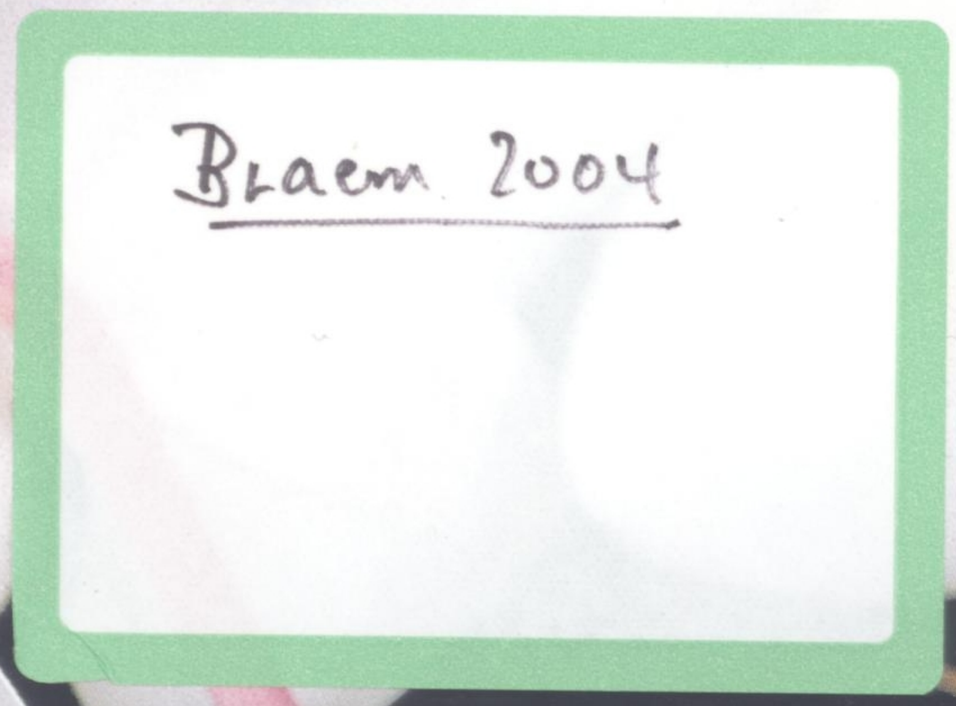

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