The 'Amethyst' Group

Leslie A. King [a] *and Axel Frank* [b]

[a] 27 Ivar Gardens, Basingstoke, RG24 8YD, UK. E-mail: la.king@btopenworld.com
[b] Sebastian-Ott-Weg 5, D-72488 Sigmaringen, Germany. E-mail: A.Frank@swol.de

Summary

It is proposed that the numerous hybrids of *P.* 'Amethyst' should be placed in a group. Although uncertainties remain about the origin of plants labelled as *P.* 'Lavender Lady' and *P.* 'Star of Mikan', they and their hybrids can still be assigned to the group based on their common features. The total group membership then extends to over forty cultivars including the basionym *P.* 'Amethyst'.

The Origin of *P.* 'Amethyst'

Vanderplank coined the name *P.* 'Amethyst' in the late 1980's when it became clear that it was a species or hybrid of unknown origin [1]. Until that time, it was thought to have been a cultivar of *P. amethystina.* In a previous set of papers [2, 3], we discussed the main features of *P.* 'Amethyst' and put forward evidence that it could be a hybrid of *P. kermesina* LINK & OTTO with *P. caerulea* L. In other words, it was closely related to, if not the original, *P.* ×*kewensis* (not the plant currently cultivated under that name). This conclusion was largely based on early literature descriptions of *P.* ×*kewensis*, examination of herbarium specimens at the Royal Botanic Gardens, Kew and a comparison of the morphological features of *P.* 'Amethyst' with those of *P. kermesina* and *P. caerulea*. Very recently, *P. kermesina* has been brought back into cultivation and crossed with *P. caerulea*. In June 2003, Fischer posted photographs on the Internet of this new hybrid [4]. As predicted by the current authors, it is almost identical to *P.* 'Amethyst'. We may never know the more recent history of the original *P.* ×*kewensis* until its 'rediscovery' in the last twenty years. Few records exist of what was growing at Kew in the early 20th Century, but certainly by 1931 it was no longer there [5].

Cultivar-Groups

Article 4.1 of the 1995 Cultivated Plant Code [6] allows for assemblages of two or more similar, named cultivars to be designated as cultivar-groups. The concept has provoked much discussion [7], particularly whether or not it should be restricted to named cultivars. Nevertheless, it has found wide use particularly for classifying non-hybrid cultivars based on their morphological appearance and growth characteristics. In the revised version of The International Code of Nomenclature for Cultivated Plants, which is due to be published in 2003, it has been recommended that the term "cultivar-group" should be replaced with "group" [8]. When used for hybrids, the group is equivalent to the "grex", which has been commonly used amongst orchid growers to designate all products from a particular cross. It can be argued that groups already exist in the genus *Passiflora* by virtue of the once-common use of the "*P.* ×*epithet*" hybrid designation. By far the best example of this is the group that includes not only the hybrids of *P. caerulea* with *P. racemosa,* but also their backcrosses (i.e. *P.* ×*violacea*).

It is now proposed that *P.* 'Amethyst' (the basionym) and its subsequent hybrids could benefit from classification into a group. The full name of a member would become, for example, "*P.* 'Eden' Amethyst Group". The advantage of a group name is that it says something about the growth characteristics and general appearance of a plant. Unless a buyer knew that e.g. *P.* 'Eden' was derived from *P.* 'Amethyst', then the cultivar epithet alone would provide no information on what the plant might look like.

Hybrids of *P.* 'Amethyst'

Table I shows the known 'simple' hybrids of *P.* 'Amethyst'. They are of the form A (♀) × Z (♂) where A = *P.* 'Amethyst' and taxon Z is commonly *P. caerulea*. Because of the almost complete pollen sterility of *P.* 'Amethyst', cultivars where taxon Z is the female parent are unknown. Table II shows three complex hybrids and illustrates a potential drawback of the group concept. Thus *P.* 'Amethyst' can be crossed and recrossed with a number of species and it is likely that some of these could eventually lose their original features and bear little resemblance to most of the simple hybrids of *P.* 'Amethyst'. Table III lists four cultivars originally produced by Worley in the 1980's, which may or may not be related to *P.* 'Amethyst'. A number of complex hybrids produced by Ševčik, where the term *P.* 'Lavender Lady' was probably used as a synonym for *P.* 'Amethyst', are set out in Table IV, while Table V lists hybrids where the name *P.* 'Star of Mikan' may have been used to mean *P.* 'Amethyst'. Unless otherwise shown in the footnotes, further details of these hybrids can be found in the two *Passiflora* checklists [9, 10].

Table I. Hybrids of the form *P.* 'Amethyst' × Taxon Z

Hybrid Name	Taxon Z
P. 'Andy' (note i)	*P. caerulea*
P. 'Angelo Blue' (note i)	*P. subpeltata*
P. 'Blue Star' (note ii)	*P. subpeltata*
P. 'Brögwagter'	*P. caerulea*
P. 'Cold Blue'	*P. caerulea*
P. 'Creamy'	*P. caerulea*
P. 'Dakota Ransom' (note iii)	*P. caerulea*
P. 'Eden' (note vi)	*P. caerulea*
P. 'Ely'	*P. caerulea*
P. 'Fixstern'	*P. caerulea* 'Constance Eliott'
P. 'Machou'	unknown
P. 'Maëva'	*P. subpeltata*
P. 'Maria' (note iv)	*P. caerulea* 'Constance Eliott'
P. 'Nocturne'	*P. amethystina*
P. 'Perfume' (note i)	*P. caerulea* 'Constance Eliott'
P. 'Pura Vida' (note v)	*P. racemosa*
P. 'Shelly'	*P. caerulea*
P. 'Star of Bristol'	*P. caerulea*
P. 'Star of Clevedon'	*P. caerulea*
P. 'Star of Kingston'	*P. caerulea*
P. 'Taza'	unknown
P. 'Venus'	*P. caerulea* 'Constance Eliott'
P. 'Violet Selection'	unknown
P. 'Violet Star'	*P. caerulea* 'Constance Eliott'
P. 'Yvonne Baron'	unknown
P. '848506' (note vii)	*P. caerulea*
P. '848512' (note vii)	*P. caerulea*
P. '848533' (note vii)	*P. caerulea*

Notes:
(i) The checklists [8, 9] disagree on the identity of these hybrids
(ii) *P.* 'Blue Star' is shown as (*P.* 'Star of Mikan' × *P. subpeltata*) in [17]
(iii) See [16] for details of *P.* 'Dakota Ransom'
(iv) *P.* 'Maria' is distinct from *P.* 'Marie' shown in Table III
(v) Two clones known as *P.* 'Pura Vida 1' and *P.* 'Pura Vida 2' were developed
(vi) *P.* 'Eden' is described in [18]
(vii) Under the revised rules of nomenclature for cultivars [8], these are now recognised as valid names. They were originally published in [19]

Table II. Complex Hybrids of *P.* 'Amethyst'

Hybrid Name
P. 'Chianti' (note i)
P. 'Justine' (note ii)
P. '8687107' (note iii)

Notes:

(i) *P.* 'Chianti' is [*P.* 'Amethyst' ♀ × *P. subpeltata* ♂] × *P. oerstedii* ♂. See [20]

(ii) *P.* 'Justine' is *P.* 'Star of Bristol' ♀ × *P. caerulea*? ♂, i.e. [*P.* 'Amethyst' ♀ × *P. caerulea* ♂] × *P. caerulea*? ♂. See [21]

(iii) *P.* '8687107' is [*P.* 'Amethyst' ♀ × *P. caerulea* ♂] × *P. caerulea* ♂. See [19]

Table III. Hybrids produced by Worley in or after 1982

Hybrid Name
P. 'Blue Bouquet'
P. 'Jeanette'
P. 'Lavender Lady'
P. 'Marie'

Table IV. Hybrids where the name *P.* 'Lavender Lady' was probably used by Ševčik as a synonym for *P.* 'Amethyst'

Hybrid Name	Taxon Z
P. 'Barbora'	unknown
P. 'Bessy'	*P. caerulea*
P. 'Blanca'	(note i)
P. 'Irma'	(note ii)
P. 'Olivie'	(note iii)
P. 'Žofie'	(note iv)

Notes:

(i) *P.* 'Blanca' was described as (*P. caerulea* 'Constance Eliott' ♂ × [*P. caerulea* ♂ × *P.* 'Lavender Lady' ♀] ♀)

(ii) *P.* 'Irma' was described as ([*P.* 'Lavender Lady' ♀ × *P.* unknown hybrid ♂] ♀ × [*P. incarnata* ♂ × *P. racemosa* ♀] ♂)

(iii) *P.* 'Olivie' was described as (*P. caerulea* ♂ × [*P. caerulea* 'Constance Eliott' ♂ × {*P. caerulea* ♂ × *P.* 'Lavender Lady' ♀} ♀] ♀)

(iv) P. 'Žofie' was described as ([*P. caerulea* ♂ × *P.* 'Lavender Lady' ♀] ♀ × *P.* aff. *oerstedii* –"*porphyretica*" ♂)

Table V. Hybrids where the name *P.* 'Star of Mikan' was probably used as a synonym for *P.* 'Amethyst'

Hybrid Name	Taxon Z
P. 'Etoile Blanche'	*P. subpeltata*
P. 'Rosa Stern'	*P. subpeltata*
P. 'Twinkle Star'	(note i)

Note:

(i) *P.* 'Twinkle Star' was described as ([*P.* 'Star of Mikan' ♀ × *P. caerulea* ♂] ♀ × *P. caerulea* ♂)

The Origin of *P.* 'Lavender Lady' and *P.* 'Star of Mikan'

It is often maintained that 'Lavender Lady' and 'Amethyst' are different epithets for the same cultivar. Worley [11] developed *P.* 'Lavender Lady', *P.* 'Jeanette' and *P.* 'Marie' in California in 1982 as the complex hybrids ({[*P. amethystina* (short peduncle) ♀ × *P. caerulea* ♂] ♀ × [*P. amethystina* (short peduncle) ♀ × *P. caerulea* ♂] ♂} ♀ × *P. caerulea* ♂). The last two are similar to *P.* 'Star of Kingston' and *P.* 'Star of Clevedon' respectively, both of which are well-known crosses of *P.* 'Amethyst' and *P. caerulea*. In 1990, Worley created *P.* 'Blue Bouquet', again from the same complex cross.

However, the plant now called *P.* 'Amethyst' was in existence well before 1982. For example, photographs and samples taken by Kugler [12] in 1970 in the botanic garden at Graz, Austria, show a plant that is identical to *P.* 'Amethyst'. This comparison was based not only on the external features such as the size and shape of the leaves and stipules and the colour of petals and corona filaments, but also on the internal structure of the calyx tube, the nectar ring, operculum and limen. A photograph of what is undoubtedly *P.* 'Amethyst', but labelled as "*P. violacea"*, can be found in Graf's book [13] published in 1978. Finally, as discussed in the previous papers [2, 3], if *P.* 'Amethyst' is indeed the original *P.* ×*kewensis* then it is over 100 years old, but the first recorded hybrid of the form *P. kermesina* × *P. caerulea,* was created over 150 years ago.

Closer examination of the alleged history of *P.* 'Lavender Lady' raises a few questions. For example, neither of the two common forms of *P. amethystina* (i.e. short peduncle or long peduncle) was available in the USA or Europe until long after 1982. Worley stated that he did not have an intact plant, but used pollen from *P. amethystina*, which at that time was in quarantine [14]. However, if the normal convention of describing hybrids was followed (i.e. *female* × *male*), then *P.* 'Lavender Lady' cannot have been generated from *P. amethystina* pollen; an intact *P. amethystina* acting as female parent would have been required. This is consistent with the alleged origin of these hybrids as shown by the crossing formula above. One explanation is that *P.* 'Lavender Lady' is no more than a hybrid of *P.* 'Amethyst' and *P. caerulea.* Just as in the UK until the late 1980's, where the plant now known as *P.* 'Amethyst' was thought to be a form of *P. amethystina,* a similar confusion could have occurred in North America. In other words, it could have been *P.* 'Amethyst'

and not *P. amethystina* that was used to produce *P.* 'Lavender Lady'. It is entirely possible that some of the hybrids produced by crossing *P.* 'Amethyst' with *P. caerulea* could resemble the *P.* 'Amethyst' parent. However, this explanation raises the question of why anyone should persist in producing a complex hybrid (i.e. *P.* 'Lavender Lady') which is not an obvious improvement on the *P.* 'Amethyst' parent and does not satisfy the accepted requirement for a new cultivar in being sufficiently distinct from existing forms.

We have examined a large number of published photographs, mostly from websites, of what are alleged to be *P.* 'Lavender Lady'. We have also cultivated a plant both in the UK and Germany, which had been obtained from the USA and originally said to be *P.* 'Lavender Lady'. However, we found in all cases that the photographs and the plant were indistinguishable from the *P.* 'Amethyst' in our own collections. In conclusion, we suggest three possibilities for *P.* 'Lavender Lady':

1. It never was anything but *P.* 'Amethyst'.

2. It was a cross of *P.* 'Amethyst' with *P. caerulea*, but the result was a plant essentially indistinguishable from *P.* 'Amethyst'. If this was the case then again the pollen parent must have been *P. caerulea* since *P.* 'Amethyst' does not produce viable pollen. This contradicts the account of using pollen from a plant in quarantine [14].

3. *P.* 'Lavender Lady' was a hybrid of *P. amethystina* as described earlier. If this is the case then it seems that *P.* 'Lavender Lady' is probably no longer in cultivation, but the name is now erroneously applied to *P.* 'Amethyst'.

According to Cor Laurens [15], *P.* 'Lavender Lady' was imported into the Netherlands sometime before 1990 by Ger van Vliet, the then director of the botanic garden in Leiden. That plant was apparently renamed *P.* 'Star of Mikan'. Since MIKAN is the recognised author of *P. amethystina*, the epithet 'Star of Mikan' suggests a connection with that species. It is unclear if this imported plant is still in cultivation, although it did give rise to three named hybrids (Table V).

Problems of Identification

Most of the hybrids in the Amethyst Group have similar vegetative features, but even distinguishing some flowers can be difficult. A good example of this is shown by the five cultivars in Figure 1. At least three of the hybrids shown (*P.* 'Andy', *P.* 'Brögwagter' and *P.* 'Star of Clevedon') are of the form *P.* 'Amethyst' × *P. caerulea.* Some uncertainty exists about the origin of *P.* 'Marie' (see earlier discussion). The identity of the final hybrid - Figure 1(e) - is unknown. It was purchased several years ago by one of us (AF) at a nursery in the Netherlands, and was originally mislabelled as *P.* 'Amethyst'. It has similar features and foliage to the other four hybrids in Figure 1, but is distinct from all of them; it clearly belongs in the Amethyst Group.

Acknowledgments

John Vanderplank was the first to suggest to us the use of cultivar-groups in *Passiflora*.

The flowers of five similar members of the Amethyst Group.

Figure 1(a) *P.* 'Andy' (Photo: Maurizio Vecchia)

Figure 1(b) *P.* 'Brögwagter' (Photo: Henk Wouters)

Figure 1(c) *P.* 'Star of Clevedon' (Photo: Mark Stratton)

Figure 1(d) *P.* 'Marie' (Photo: Mark Stratton)

Figure 1(e) Unknown hybrid (Photo: Les King)

References

[1] Vanderplank, R.J.R., New Passion Flower Hybrids, Journal of the Royal Horticultural Society, 112, 366, 1987

[2] King. L.A., Kugler, E, Frank, A. and Davis, C., *Passiflora kermesina*, Anmerkungen über *P.* ×*kewensis*, andere Hybriden von *P. kermesina* und den möglichen Ursprung für *P.* 'Amethyst', Passiflorunde, 10 (1), 2-13, 2002

[3] King. L.A., Kugler, E, Frank, A. and Davis, C., 'A Note on *Passiflora* ×*kewensis*, other hybrids of *P. kermesina* and a possible origin for *P.* 'Amethyst', Passiflora 12 (1), 18-26, 2002

[4] Fischer, R., http://groups.yahoo.com/group/Passiflora_Images/message/524

[5] Hand-list of Tender Dicotyledons and Gnetaceae Cultivated in the Royal Botanic Gardens Kew, Second Edition, H.M. Stationery Office, London, 1931

[6] Trehane P. et al. (eds), International Code of Nomenclature for Cultivated Plants, Quarterjack Publishing, Wimborne, 1995

[7] van den Berg, R.G., Cultivar-Group Classification. In: Andrews, S., Leslie, A.C., Alexander, C. (eds). Taxonomy of Cultivated Plants: Third International Symposium, 135-143, Royal Botanic Gardens, Kew, 1999

[8] Vanderplank, J., personal communication

[9] Frank, A and Kugler, E., Hybrids and Cultivars of Passion Flowers Passiflorunde**,** Special Issue No.2, June 2001

[10] Notes on the *Passiflora* Cultivars List, Passiflora 10 (3/4), 21-39, 2000

[11] Worley, *P.*, Archives of the Passiflora Enthusiasts Discussion List, 6 July 1998, http://listserv.surfnet.nl/archives/passiflora-l.html

[12] Kugler, E., personal communication

[13] Graf A.B., Tropica, 1st edition, Roehrs Company. East Rutherford, NJ, USA, 1978

[14] Worley, *P.*, personal communication, October 1999

[15] Laurens, C., personal communication; see also van Vliet, G., Een passie apart! Groei & Bloei, 6, 46, 1988

[16] https://www.ransomgardens.com/ransomgardens.nsf/PASS048.jpg

[17] Ulmer, B., Pflanzenliste 2002/3, http://www.blumen-passiflora.de

[18] Clayton, P. Developing a Hardy Passion, The Garden, 128(5), 358-359, 2003

[19] Vanderplank, J., '*Passion Flowers'*, 2nd edition., National Collection of Passiflora, 1996

[20] Fischer, R., Archives of the Passiflora Enthusiasts Discussion List, 26 June 2001, http://listserv.surfnet.nl/archives/passiflora-l.html

[21] Irvine, M., http://www.passionflow.co.uk/surb113.htm