# Inherent problems with Article 19.18 of the new Cultivated Plant Code

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Two of the primary purposes of the *International Code of Nomenclature for Cultivated Plants* (ICNCP) are to make the names of cultivated plants easier to understand and more stable over time. Article 19.18 is a new article, introduced in the most recent edition of the ICNCP (Brickell *et al*., 2004). It states that, "the epithet of a cultivar name is not to duplicate the final epithet in Latin form of the correct name under the ICBN of the taxonomic unit at the rank of species or below to which it is assigned: the cultivar name must be given a distinctive epithet as determined by Art. 19.8, where applicable." The article was intended to clarify the application of names, but it is not clear how it will affect the stability of the names involved.

Article 19.18 was proposed originally because of the confusion surrounding the hybrid *Salvia* × *superba* and its sterile clone *S.* × *superba* 'Superba'. Indeed, the article most frequently affects such cases, when the original clone of a cross with a hybrid binomial is given a name and the cultivar epithet is a reiteration of the binomial epithet. Preferably, this can be avoided by the choice of a totally unrelated cultivar epithet, such as in *Viburnum* × *bodnantense* 'Dawn' (Stearn, 1950). However, when a plant has been known for some time under just the hybrid binomial name, authors have often considered it preferable to use the binomial epithet as part of the cultivar name to maintain familiar usage, such as in Stearn's *Epimedium* × *versicolor* 'Versicolor' (Stearn, 2002). According to the new article this is now invalid and it is necessary to use the next available name, which in this case is *E.* × *versicolor* 'Discolor'.

A search was conducted in the RHS horticultural database (BG-Base) for records where the botanical epithet matched the cultivar epithet. A list of names recovered and their currently accepted alternatives is given in Table 1. As can be seen, 15 out of the 23 names involve a hybrid binomial.

Table 1: List of all cases in the RHS Horticultural Database of matching botanical and cultivar epithets with their possible alternatives

| Name with matching botanical and cultivar epithets | Currently accepted name | Alternative acceptable names |
|---|---|---|
| *Anemone* × *lipsiensis* 'Lipsiensis' | | *Anemone* 'Lipsiensis' |
| *Aucuba japonica* f. *longifolia* 'Longifolia' | | *Aucuba japonica* 'Longifolia' |
| *Bauhinia* × *blakeana* 'Blakeana' | *Bauhinia purpurea* × *variegata* 'Blakeana' | *Bauhinia* × *blakeana* 'Sir Henry Blake', *Bauhinia* 'Blakeana' |
| *Catharanthus roseus* 'Roseus' | | *Catharanthus* 'Roseus' |
| *Coprosma* × *kirkii* 'Kirkii' | | *Coprosma* 'Kirkii' |
| *Corokia* × *virgata* 'Virgata' | | *Corokia* 'Virgata' |
| *Crocus pictus* 'Pictus' | *Crocus vernus* subsp. *vernus* | *Crocus* 'Pictus' |
| *Deutzia* × *rosea* 'Rosea' | | *Deutzia* 'Rosea' |
| *Epimedium* × *versicolor* 'Versicolor' | | *Epimedium* × *versicolor* 'Discolor' |
| *Epimedium* × *youngianum* 'Youngianum' | | *Epimedium* 'Youngianum' |
| *Erica* × *stuartii* 'Stuartii' | *Erica* × *stuartii* 'Charles Stuart' | *Erica* 'Stuartii' |
| *Erica carnea* 'Carnea' | | *Erica* 'Carnea' |
| *Hebe* × *carnea* 'Carnea' | *Hebe* 'Carnea' | |
| *Juniperus* × *pfitzeriana* 'Pfitzeriana' | *Juniperus* × *pfitzeriana* 'William Pfitzer' | *Juniperus* 'Pfitzeriana' |
| *Magnolia* ×*kewensis* 'Kewensis' | *Magnolia salicifolia* 'Kewensis' | *Magnolia* × *kewensis* 'Kew Clone', *Magnolia* 'Kewensis' |
| *Magnolia* × *proctoriana* 'Proctoriana' | | *Magnolia* 'Proctoriana', *Magnolia salicifolia* 'Proctoriana' |
| *Magnolia sprengeri* var. *diva* 'Diva' | | *Magnolia sprengeri* 'Diva' |

| | | |
|---|---|---|
| *Mentha* × *piperita* 'Piperita' | | *Mentha* 'Piperita' |
| *Phalaris arundinacea* var. *picta* 'Picta' | | *Phalaris arundinacea* 'Picta' |
| *Philadelphus* × *lemoinei* 'Lemoinei' | | *Philadelphus* 'Lemoinei' |
| *Phyllostachys sulphurea* 'Sulphurea' | *Phyllostachys sulphurea* f. *sulphurea* | *Phyllostachys* 'Sulphurea' |
| *Polypodium cambricum* 'Cambricum' | | *Polypodium australe* 'Cambricum', *Polypodium* 'Cambricum' |
| *Rosa* × *odorata* 'Odorata' | | *Rosa* × *odorata* 'Hume's Blush', *Rosa* 'Odorata' |
| *Salvia* × *superba* 'Superba' | | *Salvia* 'Superba' |
| *Viburnum* × *burkwoodii* 'Burkwoodii' | | *Viburnum* 'Burkwoodii' |

The confusion caused in the application of names with duplicated specific and cultivar epithets is exemplified by *Aucuba japonica* f. *longifolia* 'Longifolia'. In 1993, the RHS gave the Award of Garden Merit (AGM) to the forma *longifolia*, but at that time did not recognise the distinct selection of this form introduced by Veitch in 1862 called 'Longifolia'. The Hillier Manual (Hillier & Coombes, 2002) recognises 'Longifolia' as a distinct female selection and interprets this clone as the only one of f. *longifolia* attributed with an AGM. However, it is not clear which "longifolia", the forma or the original clone, the relevant RHS plant committee were actually considering when they gave the award. As can be seen, in this case the application of article 19.18 would have helped avoid confusion. The different interpretations of the epithet "longifolia" and its associated AGM would not have occurred if the cultivar epithet for Veitch's female selection had been different from that of the forma.

However, a problem with the application of the article was highlighted by a recent paper on the hybrid origins of *Bauhinia* × *blakeana* (Lau *et al*., 2005). This research not only provided compelling evidence for the hybrid origin of the taxon, but also revealed a lack of genetic variation between different plants of the hybrid. It was therefore suggested that all plants of

this cross had arisen from a single plant and the authors went on to suggest that it was better described as a cultivar. Instead of choosing an original name for the clone, they reused the hybrid binomial epithet and thus gave it the name 'Blakeana'. Their taxonomic disposition caused them to regard it as inappropriate to use a hybrid binomial in the taxon name because it was not self-perpetuating in the wild, and so they styled the cultivar as *B. purpurea* × *variegata* 'Blakeana'. Styling the name like this, on the face of it, is not invalid according to article 19.18.

To most horticulturists, the use of hybrid binomials is preferable. It keeps the names concise, while retaining information about the parentage. Hybrid binomials are utilised by, and created for, the horticultural world far more than the botanical world that only deals with plants of wild origin. But in the example above, *Bauhinia* × *blakeana* 'Blakeana' is invalid, and so a new name has been proposed: *B.* × *blakeana* 'Sir Henry Blake' (Whitehouse submitted). This solution is not a problem if everyone accepts *B.* × *blakeana* as a taxonomic unit. But rules of nomenclature do not enforce taxonomic opinion, and the original authors' *B. purpurea* × *variegata* 'Blakeana' is an equally valid name. Two perfectly valid cultivar epithets therefore exist depending upon the way the hybrid nature of the cultivar is expressed in the name. This makes the cultivar epithet very unstable. The situation is compounded when the words of article 19.2 are considered: "the minimum requirement is for a cultivar epithet to accompany the name of the genus". This could lead to the conclusion that the correct format for shortening *B.* × *blakeana* 'Sir Henry Blake' would be *B.* 'Blakeana', as the cultivar epithet 'Blakeana' is no longer invalid once the hybrid binomial epithet is removed from the name.

This example may seem rather irrelevant to horticulturists, who would probably use the hybrid binomial. However, there are other examples in the list above where taxonomies might not be so generally agreed upon. Such an example can be found with certain *Magnolia* cultivars. Currently, it is thought better to regard *M.* 'Kewensis' as a selection of *M. salicifolia* (Spongberg, 1998), but others might consider, or even prove, that it is a hybrid, in which case the name would change to *M.* × *kewensis* 'Kew Clone' (Callaway, 1994). Under article 19.2, *M.* 'Kewensis' and *M.* 'Kew Clone' apply to exactly the same entity. In contrast, *M.* 'Proctoriana' has been suggested to be a selection of *M. salicifolia* (Spongberg, 1998), in which case the epithet would be a perfectly valid name. However, current

opinion favours its classification as a hybrid binomial *M.* × *proctoriana* (Gardiner, 2000). If the original clone is then to be recognised it needs a new cultivar epithet.

In botanical nomenclature, we must accept that different taxonomies will produce different names. For example, when two genera are merged, it is not uncommon for the same specific epithet to occur in both genera. In such cases, the more recently published epithet requires a new name when transferred and the connection with the original epithet is lost. A recent example is to be found in the genus *Albuca*, which some botanists now consider best included within a broad circumscription of *Ornithogalum* (Manning *et al*., 2004). *Albuca spiralis* cannot be recombined directly, as the name *O. spirale* already exists for a different species. A new name, *O. circinatum*, was therefore created: thus a different epithet has to be used for the same entity depending upon the generic concepts of *Albuca* and *Ornithogalum* employed. But to gardeners, who in general are less concerned about the taxonomy connected with a particular cultivar, having two permissible cultivar epithets for a single clone appears absurd.

At the moment the ICNCP is unclear on how one should interpret this rule. Abandoning the rule or making it just a recommendation would perpetuate the confusion of the epithets, as in *Aucuba japonica* 'Longifolia'. Tightening the wording of the article would appear to be a sensible option, but how to achieve this without enforcing a particular taxonomy on people is not evident. For example, use of the hybrid binomial *Hebe* × *carnea* is considered unhelpful, as it appears to only apply to a single clone of doubtful parentage (Hutchins & Davies 1997). *H.* 'Carnea' is a much more useful interpretation, but is at risk of being invalidated by the hybrid binomial being taken up (e.g. Metcalf, 2001) which then forces a change of the cultivar epithet. To avoid this a system of rejecting cultivar epithets, similar to that operating in the ICBN, could be instigated. This way an epithet could be permanently abandoned in favour of one that will not conflict no matter which taxonomy is supported. As each case would be examined on its merits, only those names that are likely to have alternative taxonomies would need to be considered as worthy of changing.

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