

Why do plant names change?

Despite the inconvenience, there are important scientific reasons behind plant name changes and some of these will eventually benefit gardeners

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Michaelmas daisies are known to most gardeners. The common name covers two species and their cultivars, which since the time of Linnaeus (more than 250 years ago) have been known by the botanical names of *Aster novi-belgii* and *Aster novae-angliae*. But from next year the RHS has agreed to follow the recommendation of botanists around the world and will use the names *Symphotrichum novi-belgii* and *S. novae-angliae* respectively (see below).

I can already hear the voices of

objection, and the oft-repeated phrase 'why do they always keep changing the names?' So here is an opportunity to explain why names change, and who makes the decision.

Why do we use scientific names?

While common names may be easier to pronounce, it is generally agreed that to talk accurately about a plant, a scientific name should be used. Common names vary according to language or even dialect; would you recognise an *aster de virginie* or *settembrini*? Scientific names, by contrast, are adopted around the

world because they follow set rules as agreed in the International Code of Nomenclature and the International Code of Nomenclature for Cultivated Plants.

Why names change

There are two types of name change: nomenclatural and taxonomic.

Changes to nomenclature are based on international rules governing names, where one name must be used in preference to another. These decisions are straightforward; the correct name is the one we follow. For example, rules state that the first published species name is the one

we must use. Accordingly, a plant until recently named *Zephyranthes grandiflora* (which means large-flowered *Zephyranthes*) is now called *Zephyranthes minuta*. This odd situation has occurred because when first named, the plant was thought to be an *Amaryllis*, but an exceptionally small-flowered one and was therefore named *Amaryllis minuta*. We have long known the plant to be a *Zephyranthes*, but the second part of the name must revert to the original *minuta*. We may not like this new name, but ignoring international rules would result

Beautiful *Zephyranthes minuta* (above) was once called *Z. grandiflora*. *Ficaria verna* (below) is the new name for *Ranunculus ficaria*.



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in chaos, as everyone could then choose names as they wish.

Taxonomic decisions are more contentious. The role of taxonomy is to classify organisms into different groups. These groups (correctly 'taxa' or singular 'taxon') include family, genus, species, subspecies, variety and cultivar. Botanists constantly update their views on how to classify plants. In the past this was mostly based upon visible characteristics, but genetic work has added new evidence. As a result botanists have been reclassifying plants to reflect recently revealed evolutionary relationships: that is, those plants more closely related to each other than originally thought are now placed in the same group. This should lead to future stability, but at present we are in a period of change.

Taxonomy works by general consensus; if a botanist proposes a classification change, it is simply a recommendation. If it is felt the new classification is useful and based on good evidence then others will use it. If not, then it is likely to be ignored. New names based on taxonomic decisions may come from botanists splitting up taxa into smaller taxa (such as the decision to recognise lesser celandines in a new genus, *Ficaria*, rather than *Ranunculus*) or they can be due to grouping smaller taxa in the same taxon (as was done with putting *Fortunella* and *Poncirus* into *Citrus*).

Making decisions

If taxonomic changes are simply recommendations, who chooses what to follow? For the RHS, the task falls to the Nomenclature and Taxonomy Advisory Group (NATAG), comprised of plantspeople interested in horticultural plants, all understanding how the Codes work in both botanical and horticultural worlds, as well as a broad familiarity with garden plants. By bringing people together there is usually someone familiar with the plants discussed. The advisory group also has a network of outside experts on which it can call, and welcomes contributions from anyone who has an opinion on what name should be used. Decisions made by the advisory group are reflected in the latest edition of *RHS Plant Finder*.

So when major changes to the classification of horticulturally important plants are proposed, NATAG looks at the evidence, and considers the views of other botanists around the world. Importantly, NATAG decides if the change is helpful to horticulture, not just for the immediate present (as changes are rarely welcomed) but for the future, so the horticultural world does not end up using different names from the botanical world. ●

More from the RHS For more on changes to *Aster* and the new genera, see the June issue of *The Plantsman*. www.rhs.org.uk/plantsman

Why some Aster names are changing

So what is wrong with *Aster* and who came up with *Symphotrichum*? When the naturalist Linnaeus described the genus *Aster* he included within it 30 different species. Over the years, some of these species have been separated into other genera, such as *Boltonia*, *Callistephus* (annual or Chinese aster) and *Erigeron*, now all accepted genera.

Nevertheless, until recently, 20 of Linnaeus's species remained within *Aster*, which by then comprised around 250 species across Europe, Asia and North America. In the 1990s, studies proposed that North American species of *Aster* were more closely related to other American daisies, such as *Solidago* (goldenrod). Molecular work and genetic evidence also supports

this conclusion. North American species of *Aster* were therefore separated from *Aster* and put into smaller genera. The main one for gardeners is *Symphotrichum*.

Using a new name

While this makes biological sense, what about the name? Surely something easier to say could have been chosen. Sadly, this is where the rules of nomenclature come into play. These state the first name used for the genus must be adopted. In our case, the name *Symphotrichum* was coined by Christian Nees von Esenbeck in 1832 and means 'the hairs joining together', referring to a perception that the hairs on the seed are fused towards the base.

The name *Aster*, however, will endure, for well-known garden plants remain in the genus, particularly *Aster amellus* and its hybrids with *A. thomsonii* and *A. x frikartii*, as well as alpine *A. alpinus*.

Could we all refuse to adopt this change? The Nomenclature and Taxonomy Advisory Group could have recommended retaining everything under *Aster*. It is an option and is what has been done for the past 20 years since the change was proposed. But much of the botanical world is adopting *Symphotrichum*; recent major floras of the world from North America to China have already used the name.

Eventually, horticultural and botanical worlds would use different names for the same plants - gardeners may then end up buying plants under different names not knowing that they are one and the same.

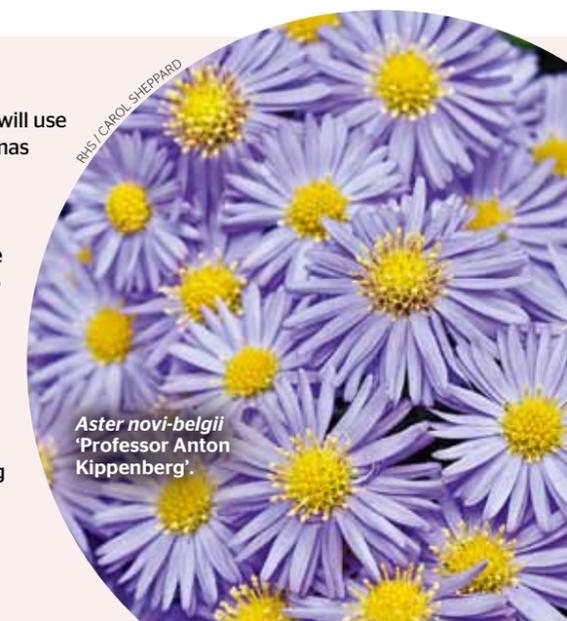
Advantages for gardeners

As a result, from 2015, RHS publications will use the name *Symphotrichum* for Michaelmas daisies and related species. Despite the inconvenience, there are benefits to this change for gardeners. Knowing plants are closely related tells us that they have characteristics in common. This can help with understanding cultural requirements, help put names to unknown plants, and help identify untested species with which they might breed. It may not make *Symphotrichum* any easier to pronounce or remember, but there is some comfort in us all developing a better understanding of our plants.



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From 2015 the RHS will classify vibrant *Aster novae-angliae* 'Andenken an Alma Pötschke' as a *Symphotrichum*.



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Aster novi-belgii 'Professor Anton Kippenberg'.