

## Director's Note

Name changes in botany are frequent and are particularly troubling to horticulturalists. Are they necessary and should they be tolerated? Since 1753, when Linnaeus codified medieval taxonomy in his great book *Species Plantarum*, the names of plants have been essentially an extension of this 18<sup>th</sup> century framework, which in turn was an extension of medieval herbal names, which themselves descended from European (particularly late Graeco-Roman) folk taxonomy. However, trying to push the huge number of newly discovered plants into such an ancient framework is a bit like putting old wine in new bottles: problems arise. The part of the name that specifies relationship, the genus, has largely been a matter of intuition or historical practice as to what is or can be included. The taxonomists "eye" was the tool that broke up or aggregated biological diversity into such units. Viewed from a modern perspective some genera are natural and others are unnatural assemblages or "rag bags" like *Senecio* and *Potentilla*. Different types of evidence, even when handled mathematically using sophisticated similarity coefficients, gave different answers. The lack of progress from 1753 to about 1985 so infuriated the world of science that funding agencies largely lost patience with botanical systematics. In many countries, systematists were largely jettisoned by the universities.

Of course, plant relationships are the result of evolutionary descent, so if descent can be determined, then what should or should not go in a genus becomes a testable hypothesis. Based on phylogeny, genera should be stable and logical. By circa 1990, the combination of computer programs and DNA sequencing made phylogenetic reconstruction possible on a large scale for the first time. A great taxonomic renaissance took place in the universities: finally the jettisoning of Linnean baggage could start. The quiet but exciting revolution, the reclassification of plants, has now been running for about a decade: a decade of head spinning advances and discoveries in molecular systematics. Two things were quickly realised; first how much of it the intuitive taxonomists had right, and secondly, conversely, how many details

of family and generic classification had to be revised. The prospect of a stable nomenclature based on sound repeatable and testable evidence is a wonderful challenge, but it will send a few sacred cows to the slaughter.

The subject of this issue, *Fragaria*, may be one of these. The genus *Fragaria* has previously been distinguished from *Potentilla* on the basis of its fleshy fruit, and this has always been of suspicious significance given the large numbers of different fruit types in the Rosaceae (the enlargement of a receptacular torus into a fleshy fruit has happened several times), and the intergeneric crossability of *Potentilla* and *Fragaria* (e.g. *Potentilla palustris* with *Fragaria chiloensis*). Molecular studies suggest strongly that unless *Potentilla* is very narrowly circumscribed, which would involve the establishment of a number of new genera, several genera traditionally considered distinct, such as *Duchesnea*, *Horkelia*, and *Ivesia*, must be included in *Potentilla*. Some evidence points to the suggestion that *Fragaria* should also be included in *Potentilla*, although further studies are needed. Mabberley, in 2002, concluded that uniting *Potentilla* and *Fragaria* was inevitable, and revised the names, with the common strawberry becoming *Potentilla* × *ananassa* (Roz.) Mabb. and *F. chiloensis* becoming *P. chiloensis* (L.) Mabb. Time will tell if “big *Potentilla*” is the right way to go, but if this change is further supported by phylogenetic evidence, strawberries at last will have found a biologically meaningful resting place, of demonstrable rather than intuitive validity.

### Reference

- Mabberley, D.J. 2002. *Potentilla* and *Fragaria* (Rosaceae) united. *Telopea* 9: 793–801.