



The purpose of plant classification

For those who have spent time in a plant nursery or garden store, it's easy to become overwhelmed at how many different classifications there are of plants. Because of the diversity in the plant kingdom, it's necessary to classify plants to help with communicating information about them.

Often, plants are grouped based on use or characteristics, including growth habit, structure/form, leaf retention, climactic adaptation and use. Common names are frequently used, but those also can be confusing. For example, the European white water lily has 245 English, French, German and Dutch names. The word lily by itself could refer to dozens of unrelated species.

To help eliminate some confusion, botanical classification is used and most often preferred when exactness is needed. Carl von Linne', a Swedish physician, botanist and professor of natural science, developed a naming system in 1753 that's still in use today – binomial nomenclature.

Today's plant classification, also known as taxonomy, is based on binomial nomenclature, which is a scientific system that gives a two -part name to each plant or animal. The first name (genus) is followed by a descriptive name (specific epithet). Together, these two names identify a species. Plants are first classified into families based on their flowers and/or reproductive parts because this is the part of the plant least influenced by environmental changes.

Species of plants that share similar flowering and fruiting characteristics are grouped into families. For example, peas belong to a large family called legumes. The pea flower is shaped much like the flower of the tree most of us know as the redbud. All legumes have similar flowers and pods, but their physical forms can be very different.

At first glance, you probably don't think roses and apples have much in common, but they both belong to the Rosaceae family. Their fruits are pomes and plants in this family share susceptibility to many of the same diseases.

Once a plant is categorized into a family, the next level of classification, called genus, is based on their relative likeness to another. Plants in the same genus share not only similar fruits, but also similar flowers, roots, stems, buds and leaves. The genus name is always capitalized and in italics.

Species definition comes with the specific epithet. At this level, specific features carried from generation to generation distinguish the group. The specific epithet can be a descriptive, Latinized adjective such as *alba*, which means white. Species names aren't capitalized, but they are italicized.

Cultivar names are more defining, but not always Latinized. Because there can be hundreds of cultivars within a species, it can be confusing. A cultivar is a group of plants that is distinguished by certain characteristics. When the plant is reproduced, it retains these characteristics, such as leaf or flower color and plant form. Cultivar names are always capitalized, in single quotes and not italicized.

Being familiar with at least the genus of the botanical name can go a long way when communicating with other plant lovers