

Classification of Plants

Plants are classified in several different ways, and the further away from the garden we get, the more the name indicates a plant's relationship to other plants, and tells us about its place in the plant world rather than in the garden. Usually, only the Family, Genus and species are of concern to the gardener, but we sometimes include subspecies, variety or cultivar to identify a particular plant.

Starting from the top, the highest category, plants have traditionally been classified as follows. Each group has the characteristics of the level above it, but has some distinguishing features. The further down the scale you go, the more minor the differences become, until you end up with a classification which applies to only one plant.

Written convention indicated with underlined text

KINGDOM Plant or animal

DIVISION (PHYLLUM)

CLASS Angiospermae (Angiosperms) Plants which produce flowers

Gymnospermae (Gymnosperms) Plants which don't produce flowers

SUBCLASS Dicotyledonae (Dicotyledons, Dicots) Plants with two seed leaves

Monocotyledonae (Monocotyledons, Monocots) - Plants with one seed leaf

SUPERORDER A group of related Plant Families, classified in the order in which they are thought to have developed their differences from a common ancestor.

There are six Superorders in the Dicotyledonae (Magnoliidae, Hamamelidae, Caryophyllidae, Dilleniidae, Rosidae, Asteridae), and four Superorders in the Monocotyledonae (Alismatidae, Commelinidae, Arecidae, Liliidae). The names of the Superorders end in -idae

ORDER - Each Superorder is further divided into several Orders. The names of the Orders end in -ales

FAMILY - Each Order is divided into Families. These are plants with many botanical features in common, and is the highest classification normally used. At this level, the similarity between plants is often easily recognizable by the layman.

Modern botanical classification assigns a type plant to each Family, which has the particular characteristics which separate this group of plants from others, and names the Family after this plant.

The number of Plant Families varies according to the botanist whose classification you follow. Some botanists recognize only 150 or so families, preferring to classify other similar plants as sub-families, while others recognize nearly 500 plant families. A widely-accepted system is that devised by Cronquist in 1968, which is only slightly revised today. Links to the various methods of classification are on this website. The names of the Families end in -aceae

SUBFAMILY - The Family may be further divided into a number of sub-families, which group together plants within the Family that have some significant botanical differences. The names of the Subfamilies end in -oideae

TRIBE - A further division of plants within a Family, based on smaller botanical differences, but still usually comprising many different plants. The names of the Tribes end in -eae

SUBTRIBE - A further division, based on even smaller botanical differences, often only recognizable to botanists. The names of the Subtribes end in -inae

GENUS - This is the part of the plant name that is most familiar, the normal name that you give a plant - Papaver (Poppy), Aquilegia (Columbine), and so on. The plants in a Genus are often easily recognisable as belonging to the same group. The name of the Genus should be written with a capital letter.

SPECIES - This is the level that defines an individual plant. Often, the name will describe some aspect of the plant - the colour of the flowers, size or shape of the leaves, or it may be named after the place where it was found. Together, the Genus and species name refer to only one plant, and they are used to identify that particular plant. Sometimes, the species is further divided into sub-species that contain plants not quite so distinct that they are classified as Varieties. The name of the species should be written after the Genus name, in small letters, with no capital letter.

VARIETY - A Variety is a plant that is only slightly different from the species plant, but the differences are not so insignificant as the differences in a form. The Latin is *varietas*, which is usually abbreviated to *var.* The name follows the Genus and species name, with *var.* before the individual variety name.

FORM - A form is a plant within a species that has minor botanical differences, such as the colour of flower or shape of the leaves. The name follows the Genus and species name, with form (or f.) before the individual variety name.

CULTIVAR - A Cultivar is a cultivated variety, a particular plant that has arisen either naturally or through deliberate hybridisation, and can be reproduced (vegetatively or by seed) to produce more of the same plant. The name follows the Genus and species name. It is written in the language of the person who described it, and should not be translated. A cultivar is either written in single quotation marks or has *cv.* written in front of the name.

Example of Classification The full botanical classification of **Lady Ackland's Cattleya, a Corsage Orchid, with a red lip:**

KINGDOM *Plantae*

PHYLUM *Anthophyta*

DIVISION *Monocotyledons*

CLASS *Angiospermae* *Angiosperms*

SUBCLASS *Dicotyledonae* *Dicotyledons*

ORDER *Asperagales*

FAMILY *Orchidaceae* *Orchid Family*

TRIBE *Epidendreae* *Epidendrum Tribe*

GENUS *Cattleya*

SPECIES *Cattleya aclandiae*

FORM (*Cattleya aclandiae*) '*Rubra*' Red form