ORDER: endings in “ALES”

FAMILY: endings in “CEAE”. Families are very important to the classification of plants. The genera (plural for genus) they contain may have many characteristics in common besides the usual flower similarities, although be quite distinct from one another.

For example: Ericaceae Family: contains heaths, heathers, blueberries, rhododendrons, and azaleas (just to name a few). All of which have the similar bell shape flower, and like a moist, peaty root run, with good drainage.

Knowledge of families can help to draw generalities between the genera, which can help in the cultivation of plants.

GENUS: is the first Latin name of the plant, the first letter is always capitalized, and either italicized or underlined. Some genera are so common that everyone uses the genus as the common name of the plant. For instance: Magnolia, Camellia, Geranium etc.

SPECIES: or specific epithet, is the second Latin name for the plant, it is always in lower case letters, and either italicized or underlined. Species can be singular or plural, and it is usually descriptive of the plant. For instance:

- alba (white)
- rubrum (red)
- aureum (golden)
- variegata (variegated)
- vulgaris (common)
- sativus (cultivated)
- officinalis (medicinal)
- tuberosum (bearing tubers)

The Genus and species combined make the full Latin name for the plant, and this naming system of plants is called binomial nomenclature.

VARIETY: (or Botanical Variety) is a subclassification of the traditional species. They usually breed true to seed. For example: Scilla siberica var. alba is the white form of Siberian Squill (which is normally blue in the species).

HORTICULTURAL VARIETY: (or Cultivars, a contraction of cultivated variety) are plant varieties that have been produced or selected in cultivation, not the wild. They are denoted with “cv.” or single quotation marks in the name. For example: Acer circinatum cv. Pacific Fire, or Acer circinatum 'Pacific Fire'

HYBRIDS: Names of hybrids should be preceded by a capital letter X. A hybrid genus example is X Fatshedera a cross between the genera Fatsia and Hedera. A hybrid of the two species Taxus baccata and Taxus cuspidata is Taxus X media. The capital letter X should not be pronounced as “ex” but stated as “the hybrid genus” or “the hybrid species”.
<table>
<thead>
<tr>
<th>Dicots</th>
<th>Monocots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotyledons 2 (seldom 1, 3, or 4)</td>
<td>Cotyledon 1 (or the embryo sometimes undifferentiated, as in Orchidaceae)</td>
</tr>
<tr>
<td>Leaves mostly net veined</td>
<td>Leaves mostly parallel veined</td>
</tr>
<tr>
<td>Vascular bundles in stem usually borne in a ring that encloses a pith (herbaceous and young dicots)</td>
<td>Vascular bundles in stem usually scattered, or in two or more rings</td>
</tr>
<tr>
<td>Vascular cambium usually present</td>
<td>Vascular cambium lacking; usually no cambium of any sort</td>
</tr>
<tr>
<td>Floral parts, when of definite number, typically borne in sets of five, less often four, or multiples of five or four (carpels often fewer)</td>
<td>Floral parts, when of definite number, typically borne in sets of three or multiples, seldom four, never five (carpels often fewer)</td>
</tr>
<tr>
<td>Mature root system primary, adventitious, or both</td>
<td>Mature root system wholly adventitious</td>
</tr>
</tbody>
</table>

**FIGURE 2-1.** Some characteristics of dicots (left) and monocots (right).