

TRENDS IN ANGIOSPERM EVOLUTION

REDUCTION AND FUSION OF PARTS

Trends in Perianth

- Change from an indefinite to a definite number of parts (e.g. 5 in Rosidae and Asteridae)
- Spiral to radial insertion of parts (Magnolia to Rosa)
- Fusion of petals (Tubiflorae), calyx and corolla (hypanthium in Rosaceae and Onagraceae) and stamens to corolla (epi-petal in Asteraceae)
- Loss of either calyx or corolla (Nyctaginaceae)
- Radial symmetry to zygomorphy (Aconitum, Pelargonium, Lamiaceae)

Trends in Androecium

- Decrease in number of stamens (100s in Ranunculaceae to 5, 4 or 2 in Lamiaceae)
- Fusion into sheaths and bundles (Leguminosae, Malvaceae)

Trends in Gynoecium

- Apocarpous to syncarpous (takes less wall material and can be serviced by one style)
- Hypogyny to epigyny (provides better protection of ovary)

Trends in the Inflorescence

- suppression of branches and nodes (Magnolia, Ranunculus flowers ~ 1 or 2 per stem)
- raceme → umbel (Apiaceae, Alliaceae)
→ capitulum (Valerianaceae, Asteraceae)
- raceme → spike → spadix (Araceae) or catkin (Betulaceae)