

Botanical Identification for the Herbalist

Tobias Policha, PhD
Cascadia Botanical Institute

The most important foundation for healing with plants is knowing what you are putting in your body. The difference between medicine and poison can be the difference in the shape of a fruit or the venation of a leaf. While becoming a proficient botanist can take years to hone, learning the basics of botanical identification and plant family recognition can open the door to the plant world relatively easily. We will focus on floral morphology, vegetative diversity and learn family characteristics for some of the common families that are rich in medicinal species.

What is botany?

Botany is plant sex (largely...)

ID -- First step to knowing (like a person's name)

Latin names vs common names

Species concepts

Families (ie. Rosaceae) – groupings of related species with similar characters

Plant Anatomy

Flowers

Inflorescences

Fruits

Leaves

Underground parts – roots, rhizomes, bulbs, corms.

Habit – herb, tree, shrub

Flower Anatomy

Four whorls of the flower

Sepals (calyx)

Petals (corolla)

Stamens

Pistil

Ovary placement – superior vs. inferior

Planes of symmetry – regular vs. irregular

Organization

Complete vs. incomplete

Perfect vs. imperfect

Monoecious

Dioecious

Leaf Anatomy

Blade, petiole, axil

Sessile vs. petiolate

Arrangement

Opposite, alternate, whorled

Basal vs cauline

Patterns: pinnate vs palmate

Veination

Compound leaves (leaflets)

Margins – entire vs. lobed, serrate, crenulate, etc.

Surfaces – glabrous vs. pubescent (~20 kinds of hairs)

Bracts – modified leaves

Family Characteristics

Rosaceae – Rose Family

Many stamens; floral cup (hypanthium) present; leaves usually have stipules. *Malus, Potentilla, Prunus, Rosa, Rubus*; “yarfa”.

Lamiaceae (Labiatae) – Mint Family

Flowers irregular (zygomorphic), bilabiate (2-lipped); stamens 4, often didynamous (2 long, 2 short); leaves opposite; stems square; fruit usually 4 smooth nutlets. *Lavandula, Mentha, Rosmarinus, Salvia, Scutellaria, Stachys, Thymus*; many aromatics and calming herbs.

Apiaceae (Umbelliferae) – Carrot Family

Inflorescence usually an umbel or compound umbel (an umbel of umbels); stems often hollow; sheathing petioles; usually compound leaves; fruit a schizocarp., *Angelica, Conium, Cicuta, Daucus, Lomatium, Petroselinum*; many edibles, medicinals, and poisons!

Asteraceae (Compositae) – Sunflower Family

Inflorescence a head; disk and/or ray flowers; involucre bracts sepeloid; ovary inferior; fruit an achene. *Arnica, Bellis, Calendula, Echinacea, Silybum, Taraxacum*.

References & Resources

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