

Flowering Plants of the Northeast

Selected Families

From **A Field Guide to Wildflowers: Northeastern and North-Central North America** (Peterson Field Guides) (Paperback) by Margaret McKenny and Roger Tory Peterson. Houghton Mifflin. 1998.

For more detailed descriptions of plant families, see <http://theseedsite.co.uk/families.html>

For information about plant family relationships, see <http://theseedsite.co.uk/class2.html>

Monocotyledons (monocots)



SPIDERWORT FAMILY (Commelinaceae). Plants with leafy stems (leaves linear, parallel-veined) and terminal clusters of flowers that open one or two at a time. Three roundish petals (equal in spiderworts, lower one smaller in dayflowers), usually blue; subtended by a leafy spathe in dayflowers.



PICKERELWEED FAMILY (Pontederiaceae). Plants of mud and shallow water with glossy dark leaves (emergent in Pickerelweed, often floating in mud-plantains). Flowers of Pickerelweed are clustered in a hyacinthlike spike; those of mud-plantains are smaller, blue or white, 6-pointed.



LILY FAMILY (Liliaceae). Includes lilies, trilliums, onions, tulips, hyacinths, etc. Bulbed perennials with parallel-veined leaves. Flowers usually bell-like or triangular, with plan of 6 or 3. Typical lilies have 6-parted flowers with 6 stamens and a long pistil ending in a 3-lobed stigma. Trilliums are triangular, with 3 leaves, 3 petals, 3 sepals.



DAFFODIL or AMARYLLIS FAMILY (Amaryllidaceae). Bulbed plants with narrow, grasslike leaves and showy, 6-parted, often lily-like flowers (differ from lilies by having "petals" attached to, or part of, seed receptacle)



IRIS FAMILY (Iridaceae). Plants with flat swordlike or grasslike leaves ranked edge to edge basally. Showy flowers in plan of 3 (3 sepals, 3 petals, 3 stamens, 3 styles); irregular in true *Iris* with 3 broad, petal-like sepals ("falls") heavily veined and arching down, 3 erect petals ("standards"), and 3 prominent styles (which look like shorter petals) over the sepals. Blue-eyed Grass (*Sisyrinchium*) and Blackberry-lily (*Belamcanda*) have sepals and petals alike, seeming 6-petaled.



ORCHID FAMILY (Orchidaceae). Many tropical orchids are epiphytic (perched on trees); ours are terrestrial. Flowers 6-parted, irregular, with 3 sepals, 2 lateral petals, and a 3rd petal, usually larger, sometimes saclike or liplike, and often with a spur. Flowers single, in clusters or spikes. Leaves entire, parallel-veined (sometimes scale-like).

Dicotyledons (dicots)



WATER-LILY FAMILY (Nymphaeaceae). Aquatic plants with long stalks rooted in mud and floating or emergent platterlike leaves. Flowers showy, on separate stalks.



BUTTERCUP or CROWFOOT FAMILY (Ranunculaceae). A large North Temperate family, best characterized by the numerous stamens and pistils that form a button or bushy cluster in the center of the flower. In many species, such as the hepaticas, the petals are absent and the sepals are showy, resembling petals.



PINK FAMILY (Caryophyllaceae). The hothouse Carnation is the best-known example. Pinks, in general, are known by swollen joints, opposite (or whorled) leaves, and flowers with 5 (sometimes 4) petals, which are usually notched, 5 sepals, and 8 to 10 stamens.



BUCKWHEAT FAMILY (Polygonaceae). These plants, which include smartweeds, knotweeds, and buckwheat, have swollen sheaths or joints ("knots") where each leaf is attached. Stem often zigzag. The insignificant flowers are without petals, made up of sepals (often colored like petals in *Polygonum*); usually in a slender cluster or head.



GOOSEFOOT FAMILY (Chenopodiaceae). Weedy plants with inconspicuous flowers (no corolla), often in clusters, mostly greenish, succulent. Leaves usually alternate.



AMARANTH FAMILY (Amaranthaceae). Weedy plants, often with clusters or spikes of inconspicuous flowers subtended by greenish bracts or bractlets that may obscure them.



POKEWEED FAMILY (Phytolaccaceae). Our species is a rank, branchy plant with large toothless leaves. Slender racemes of flowers are paired opposite the leaves. The 5 petal-like sepals later support flat purple-black berries with red stems.



PURSLANE FAMILY (Portulacaceae). Small plants; 2 sepals, usually 5 petals; leaves usually opposite, toothless, thickish.



NETTLE FAMILY (Urticaceae). Plants of this family may or may not have stinging hairs. Most of our species have toothed opposite leaves and racemes of inconspicuous flowers in the leaf axils.



MALLOW FAMILY (Malvaceae). The garden Hollyhock is familiar. Showy flowers with 5 broad petals, 5 sepals. The characteristic feature is a column formed by the stamens that join around the style. The tip or tips of the style project through the round cluster of anthers.



VIOLET FAMILY (Violaceae). The garden Pansy belongs to this family. Low plants; flowers with 5 petals, the lowest often wider, heavily veined, and extending back into a spur; the lateral petals usually bearded. Violets have a distinctive pistil with a thickened head and a short beak. The Green Violet (p. 366) does not look like a violet but can be recognized as one by its pistil.



WINTERGREEN or PYROLA FAMILY (Pyrolaceae). Small woodland plants, often under conifers. Leaves usually evergreen; flowers hang down, parts mostly in 5's (5 petals, 5 sepals, 10 stamens). In genus *Pyrola* flowers are arranged along a leafless stalk with leaves near base. In genus *Chimaphila*, leaves are in whorls around stem. Genus *Monotropa* has no green pigment. Genus *Moneses* has a single nodding flower.



ROSE FAMILY (Rosaceae). Among cultivated flowers the rose is paramount. Wild roses have 5 roundish petals, 5 sepals, and numerous stamens encircling the center. So do the other genera of this large family, which includes strawberries, blackberries, apples, etc. Leaves alternate, usually with stipules (small modified leaflets where leafstalk joins stem).



PEA FAMILY (Fabaceae). Beans, peas, clovers belong to this family. Note the shape of the flowers (typical is the Sweet Pea of the garden). Most genera have irregular flowers with 5 petals (2 lower ones join to form a keel, 2 side ones form wings, upper one a banner); often clustered in heads as in clovers. Leaves usually alternate, compound, with stipules (or tendrils or thorns).




MUSTARD FAMILY (Brassicaceae) Cabbage, turnip, radish belong to this family. The *Cruciferae* are so named because their 4 petals form a cross. There are 6 stamens (2 usually shorter). The single pistil develops into a characteristic seedpod, which in many species is slender and angles upward.




EVENING-PRIMROSE FAMILY (Onagraceae). Largely showy flowers which close after midday. Most genera have flower parts in 4's (4 petals, 4 sepals, 4 or 8 stamens). The 4-branched stigma forms a characteristic cross. Genus *Circaea* (enchanter's night-shades) has the parts in 2's (2 deeply lobed petals, 2 stamens, 2-branched stigma).




GERANIUM FAMILY (Geraniaceae). Pink or lavender, 5-parted flowers (5 petals, 5 sepals, 5-15 stamens). After the petals fall there remains an erect, beaklike pistil ("cranesbill"), which, when seeds mature, splits from the base into 5 curled strips. Leaves deeply cleft, suggesting buttercup leaves.




SAXIFRAGE FAMILY (Saxifragaceae). Closely related to the Rose Family but differing in seed characteristics. Some are widely cultivated in rock gardens. Leaves mostly basal, often forming a rosette.




WOOD-SORREL FAMILY (Oxalidaceae). Our one genus, *Oxalis*, has somewhat cloverlike leaves on slender stalks. These leaves, divided into 3 inversely heart-shaped leaflets, may be folded down the center at times. Flowers 5-parted (5 petals, 5 sepals, 5-15 stamens).




TOUCH-ME-NOT FAMILY (Balsaminaceae). Thin-leaved plants with watery juices and pendent, bright flowers of irregular shape. Mostly tropical. Our genus, *Impatiens*, has 1 large, colored, bell-shaped sepal from which 3 petals emerge. There are 2 smaller green sepals. The slender seedpod, when ripe, pops at a touch into 5 coiled valves and ejects the seeds.




PARSLEY or CARROT FAMILY (Umbelliferae). Plants with umbrella-shaped clusters (umbels) of numerous small 5-petaled flowers. Umbels usually compound. Leaves usually finely cut.




GENTIAN FAMILY (Gentianaceae). Flowers with 4 to 12 joined petals and an equal number of stamens joined to them. Leaves usually opposite, stalkless, undivided. Marsh-pinks, *Sabatia*, have star-shaped pink or white flowers. Gentians, *Gentiana*, are usually blue, tubular, petals united for most of length.




MILKWEED FAMILY (Asclepiadaceae). Plants with thick, milky juice; most have leaves paired or in whorls of 4. Flower structure unique, with 5 swept-back petals and a 5-parted cup that supports 5 little horns curving onto the central structure of united stamens and stigma. Flowers borne in umbel-like clusters; fruit a long pod, with seeds attached to tufts of floss.




MORNING-GLORY FAMILY (Convolvulaceae). Mostly vines with bell-shaped blossoms, often showy. The 5 united petals flare out to form a bell-like corolla with very shallow lobes. The dodders (*Cuscuta*) are leafless vines with minute flowers.




PHLOX FAMILY (Polemoniaceae). The garden varieties are familiar. In genus *Phlox* the 5 flat petals are joined at the narrow corolla tube, which conceals the 5 stamens and 3-pronged style; leaves simple, undivided. In genus *Polemonium* the flowers are bell-like, with drooping stamens projecting beyond the 5 joined petals; leaves pinnately divided.




FORGET-ME-NOT FAMILY (Boraginaceae). Note the characteristic flower arrangement — a 1-sided, rolled-up coil that gradually unfolds with growth. Flower parts mostly in 5's (calyx lobes, corolla lobes, stamens); 1 style. Leaves alternate, undivided.




VERVAIN FAMILY (Verbenaceae). Plants with paired, toothed leaves and small flowers in slender spikes or flat clusters. In most of our species there are 5 flat petals, united to a corolla tube, 5 unequal sepals, 4 stamens (2 shorter).




MINT FAMILY (Lamiaceae) Herbs with tiny glands that may give an aromatic odor. Most have square stems and opposite leaves. Flowers small, usually in spikes or in clusters in axils of leaves. The corolla is a tube usually with 2 flaring lips (labia, hence "Labiatae"); the upper lip notched or 2-lobed, the lower 3-lobed. Although most mints have these characters, there are exceptions. Stamens 2 to 4; style 1, forked at tip; sepals joined.




PLANTAIN FAMILY (Plantaginaceae). Leaves in a basal rosette; flowers minute, crowded in a slender cluster on a separate stalk.




TOMATO or NIGHTSHADE FAMILY (Solanaceae). Tomatoes, potatoes, peppers belong to this family. Some species poisonous. Flower parts mostly in 5's; fruit a pod or berry with many seeds. Ground-cherries (*Physalis*) have sepals that form a papery bag about the berry. Jimsonweed (*Datura*) is spiny with a morning-glory-like flower. Nightshades (*Solanum*) have stamens and pistil united to form a beak.




SNAPDRAGON FAMILY (Scrophulariaceae). Flowers of this family may have swollen corolla-tubes that flare into 2 "lips" (2 lobes above, 3 below). Or, the 5 "petals" (sometimes 4) may be more regular. Thus, not all look like the snapdragons of the garden. Stamens 2 to 5 (1 or 2 may lack anthers). The style may or may not be forked.



BLUEBELL FAMILY (Campanulaceae): (1) **BLUEBELL SUB-FAMILY** (Campanuloideae). Widely distributed; some tropical species are shrubs and trees. Canterbury Bells of the garden belong to this family (English Bluebells belong to the Lily Family; "Virginia Bluebells," *Mertensia*, to the Forget-me-not Family). The corolla is usually bell-shaped, with 5 flaring lobes, 5 stamens, a single style with a 2- to 5-lobed stigma. Leaves undivided, alternate.

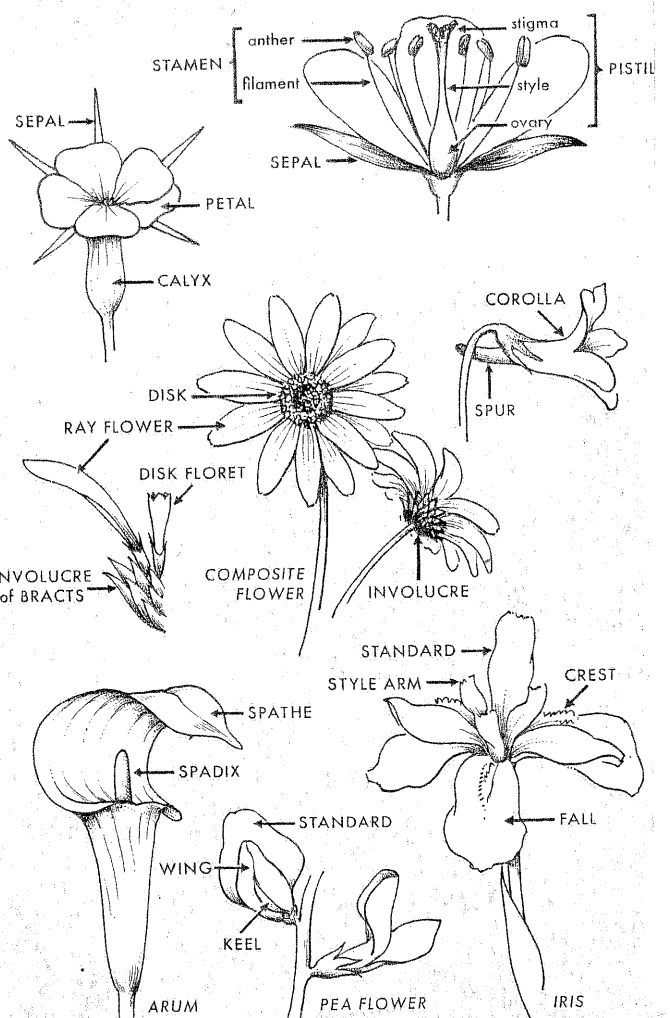
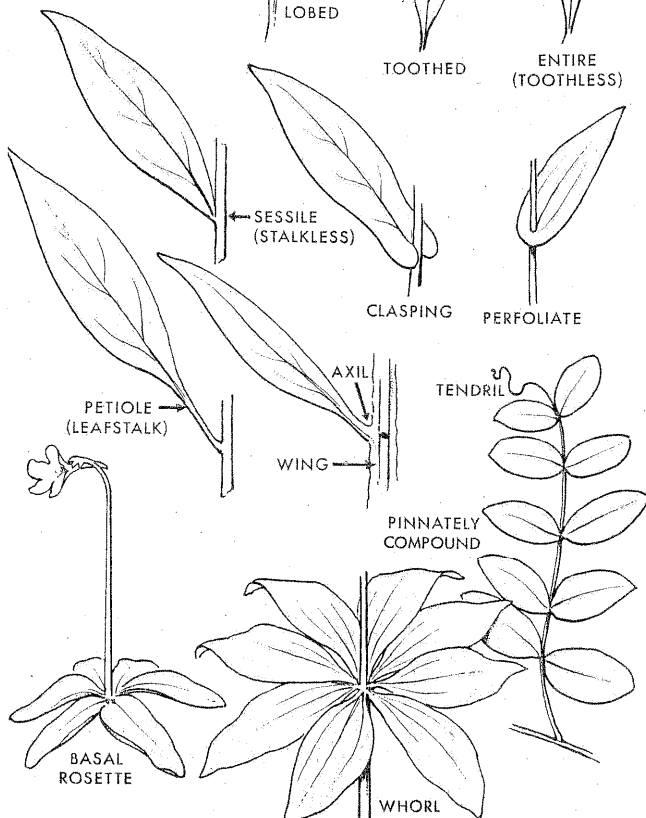
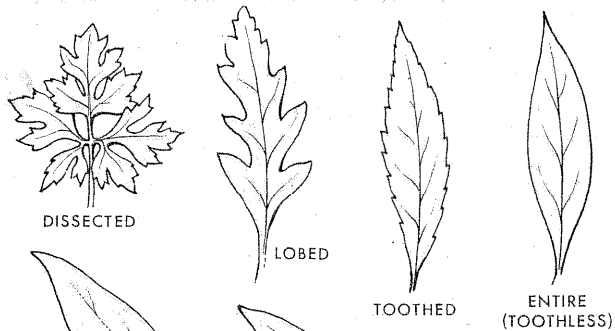
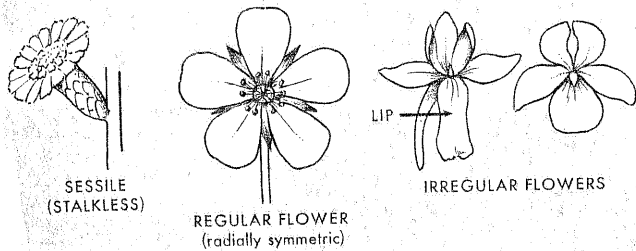
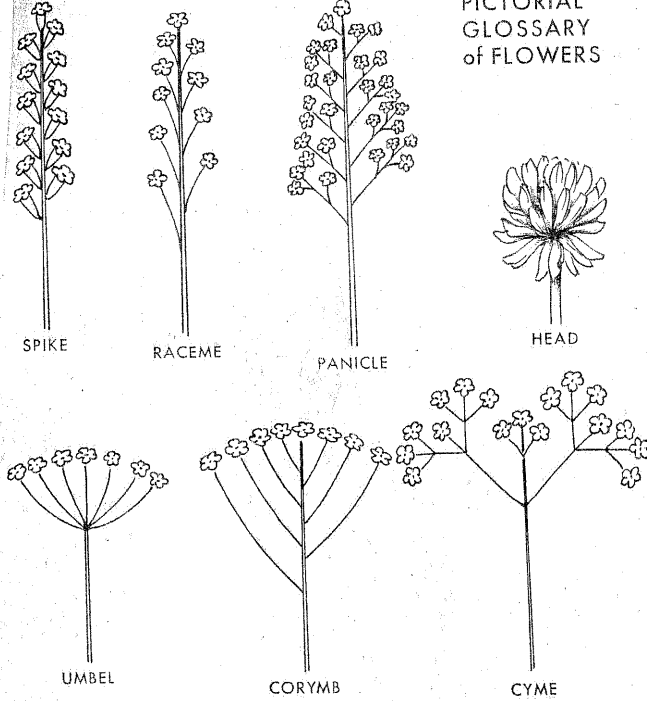


(2) **LOBELIA SUB-FAMILY** (Lobelioideae). Our genus, *Lobelia*, is especially distinctive. Corolla tube opens along upper side; 2 lobes on upper lip and 3 lobes on drooping lower lip. Stamens joined together in tube. Leaves alternate; plant has milky juice.



COMPOSITE or DAISY FAMILY (Asteraceae) The largest family of flowering plants, perhaps the most recent family to appear on earth. The flower heads are clusters of many small flowers growing together (hence, composite). These produce many seeds, which may be provided with bristles, prickles, or soft hairs, aiding in their distribution. Typical composites have flat strap-shaped flowers (rays) as well as small tubelike flowers (disk flowers). The rays are arranged in a circle around the center disk as in a daisy. Supporting each flower cluster is a compact involucre of small leaflets, or bracts. Some composites lack rays.

PICTORIAL GLOSSARY of FLOWERS



PICTORIAL GLOSSARY of LEAVES (Flowers on front endpapers)

