

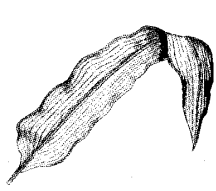
A Key to the Common Flowering Plant Families of the Methow

by Dana Visalli/Methow Biodiversity Project PO Box 175 Winthrop, WA 98862 6.08 version

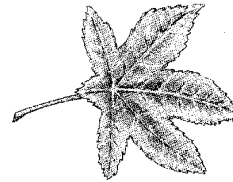
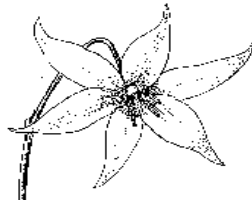
Note: This worksheet is a tool to assist in learning some of the distinguishing characteristics of the major plant families in the Methow Valley and in central Washington. The one-line entry below for each family presents some of the most salient characters of that family. As a key, this worksheet will work well about 75% of the time.

To use the key, first determine whether the plant in question is a monocot or a dicot (the distinction is illustrated below). Within the monocot or dicot groups, work through the statements made in **bold** that share the same number (e.g. 2a, 2b, 2c) until the plant in question fits the description, then move to next set of numbers (3a, 3b etc). Once you arrive at a grouping of families, work through the family characters one family at a time until you find the one that matches the plant in hand.

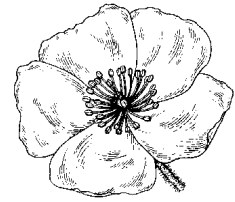
The first entry below under **Dicots, Flowers very small**, is an effort to ferret out some of the very small flowers early in the key. Most of the families in this category have species with larger flowers as well, and are keyed again elsewhere. The Aster Family is keyed in this “flowers very small” group because the flower heads in this family are made up of a composite group of very small flowers or “florets.”



Monocots have leaves with parallel veins and flowers with their sepals and petals numbering three each, or multiples of three (like six).



Dicots have leaves with veins usually forming a branching pattern and 4-5 each of sepals and petals (or multiples of 4-5, like 8 or 10)

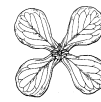


1a. Plant a Dicot (Monocots are on the next page)

2a. Flowers very small, 1/4" or less in diameter



Madder Family



Mustard Family



Aster Family

Note: In the Aster Family (also know as the Sunflower and/or Composite Family), what may appear to be a flower (a sunflower, for example) is actually a head composed of many very small flowers all crowded together. Thus this family appears in this group.

4 sepals, 4 petals, 4 stamens, stems squarish, leaves whorled, ovaries and fruits are two small spheres. **Madder Family.**

4 petals, 6 stamens, usually 4 long and 2 short, attached at base of ovary, lvs/seeds taste like mustard. **Mustard Family.**

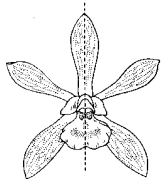
5 sepals, 5 petals, stamens 20+ per flower, in whorls with inner whorl shorter, leaves often oval & serrate. **Rose Family.**

5 lobes on tiny, fused petals, tiny flowers crowded together in a head with a series of bracts beneath. **Aster Family.**

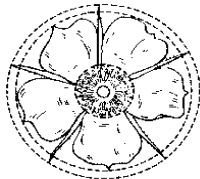
6 tepals, 6 or 9 stamens, flowers numerous, leaves sheathing around the stem, stem joints swollen. **Buckwheat Family.**

Several clusters of tiny flowers on stalks radiating out from a common point, leaves sheathing at stem. **Parsley Family.**

Flowers tiny, greenish, congested on stalks growing from leaf axils, often a mealy powder on leaves. **Goosefoot Family.**

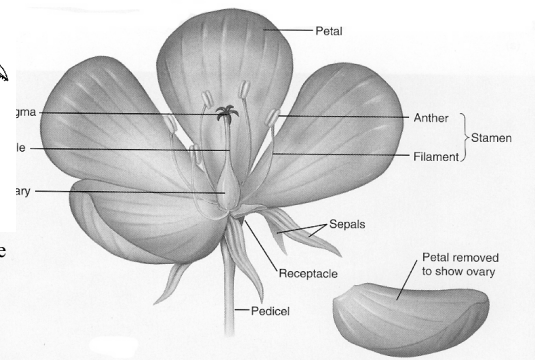
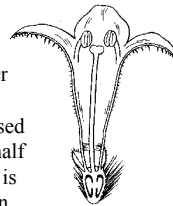


A bilateral flower; it can only be divided in half evenly by a line down the middle.



A radial flower; it can be evenly divided in half anywhere around its circumference. Note also: the petals are unfused, the stamens are inserted at the base of the ovary.

This flower has petals that are fused together (half the flower is cut away in this view), and the stamens are attached to the petals, rather than at the base of the ovary.



2b. Flowers strongly bilateral

3a. Flower petals all fused together, the stamens attached to the petals rather than at the base of the corolla.

4 anthers, flower stem usually squarish (rather than round), plant usually aromatic, ovary with 4 seeds. **Mint Family.**

4 anthers, flower stem usually round (rather than squared), plant not aromatic, ovary with many seeds. **Figwort Family.**

3b. Flower petals completely or nearly separate (unfused), the stamens attached at the base of the corolla.

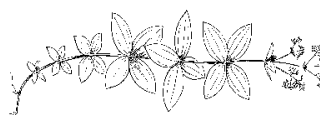
5 stamens, the lower petal the largest and spurred, leaves simple, often heart-shaped. **Violet Family.**

10 stamens (occasionally 5), the upper petal the largest, not spurred, leaves compound. **Pea Family.**

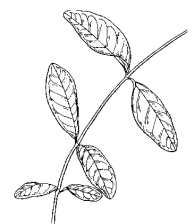
10-to-many stamens, upper petal large and spurred or forming a hood. **Buttercup Family**



Leaves alternate on the stem



Leaves whorled on the stem



Leaves opposite on the stem

2c. Flowers radial or nearly so

4a. Flower petals all fused together, the stamens attached to the petals rather than at the base of the corolla

Leaves basal or whorled, stamens opposite corolla lobes, petals sometimes reflexed. **Primrose Family**.

Leaves opposite, at least the lowest stems woody with pithy center, flowers sometimes in pairs. **Honeysuckle Family**.

Leaves opposite or whorled, stems never woody, plant completely hairless, stem often winged. **Gentian Family**.

Three style branches and three stigmas, stamens inserted at different levels on the corolla. **Phlox Family**.

Stems & leaves covered with rough hairs, center of corolla usually narrowed by small appendages. **Borage Family**.

Stems & leaves covered with glandular hairs, stamens long-exserted, corolla not narrowed. **Waterleaf Family**.

Vines with alternate leaves, flowers large and showy, the corolla twisted in the bud stage. **Morning-glory Family**.

Leaves alternate, corolla lobes spreading or reflexed, anthers exserted & upright around style. **Nightshade Family**.

4b. Flower petals all fused together, the stamens attached at the base of the corolla

1 stigma, anthers open by holes at the top, flowers usually bell-shaped, usually woody shrubs. **Heather Family**.

2 stigmas, the petals & stamens are inserted on a disk at the top of the ovary, woody shrubs. **Current Family**.

3 stigmas, stamens hairy at base, flowers blue/purple & often bell-shaped, often have milky sap. **Bluebell Family**.

4c. Flower petals nearly or completely free (not fused)

12-18 petals, sepals 5-9, flowers very showy, on ground, lacking leaves. Bitterroot, in the **Purslane Family**.

4 petals, 4-8 stamens attached to the petals, stigmas elongate, ovary inferior and elongate. **Evening-primrose Family**.

4 petals, 6 stamens, usually 4 long and 2 short, attached at base of ovary, lvs/seeds taste like mustard. **Mustard Family**.

Leaves opposite, narrow, node swollen where leaf joins stem, petals often deeply lobed or clawed. **Pink Family**.

Succulents with short, fleshy leaves, yellow flowers, 5-10 stamens, 3-5 stigmas, often on rocks. **Stonecrop Family**.

Woody shrubs with prickly, holly-like leaves, yellow flowers with 9 sepals, 6 petals, 6 stamens. **Barberry Family**.

5 stigmas, beak-like seedpod elongates from flower center, the 5 or 10 stamens attached at base. **Geranium Family**

Stamens many, attached together into a tube around style, anthers kidney-shaped, stigmas 5-15. **Mallow Family**.

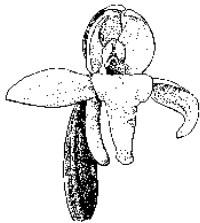
2 sepals, leaves often somewhat succulent, 4-6 petals and 1 or 2x as many stamens, stigmas 2-8. **Purslane Family**.

3 or more simple pistils often with hooked tips, stamens often >10, 3-15 sepals, 0-15 petals. **Buttercup Family**.

Stamens 5 or 10, filaments often flattened, stigmas 2-3, petals 5, sometimes less showy than sepals. **Saxifrage Family**.

Stamens numerous (10, 15, 20), the inner ones shorter than the outer, leaves often oval & serrated. **Rose Family**.

1b. Plant a Monocot



Orchid: flower bilateral, with the lower petal forming a lip or bowl.



Lily: flower radial, 6 stamens, with three sepals and three petals, all alike and colorful.



Iris: flower radial (or nearly so), 3 stamens, sepals and petals rather alike and colorful.



Rush: very small flowers have 6 tiny green or brown 'tepals' (sepals and petals together) and 3 stigmas.

5a. Monocot with showy flowers

6a. Flowers strongly bilateral

Lower petal forming a lip or bowl, stamens and pistil fused into a single column. **Orchid Family**.

6b. Flowers radial or nearly so.

6 stamens, 3 sepals & 3 petals, all alike & colorful, with narrow/broad leaves, leaves not folded. **Lily Family**.

3 stamens, 3 sepals & 3 petals, all alike & colorful, with narrow leaves folded over on themselves. **Iris Family**.

5b. Monocot with non-showy flowers

Grass-like plants with round, jointless stems, small flowers have 6 green or brown "tepals (see drawing). **Rush Family**.

Grassy plants with round, jointed, hollow stems (joints are knee-like swollen areas). **Grass Family**.

Grass-like plants with triangular stems (at least near the flower head), which are unjointed and pith-filled. **Sedge Family**.