

## 20. Synopsis of Plant Families Containing Numerous Weedy Species\*

1. Fruit 1-seeded, commonly an achene or grain; leaves not trifoliate.
2. Leaves grass-like, with a linear blade and a basal sheath surrounding the stem; inflorescences green; flowers not evident, hidden by surrounding bracts; petals and sepals absent; stamens usually three.
3. Leaves in two rows on opposite sides of the rounded or flattened stem; flowers surrounded by 2 to several bracts; outline of embryo visible externally on grain.

### GRASS FAMILY (*Gramineae*)

3. Leaves arising in three rows from triangular stems (certain sedges, not common as weeds, have rounded stems without evident leaves); flowers enclosed by a single bract and frequently a beaked, sac-like structure; outline of embryo not visible on seed.

### SEDGE FAMILY (*Cyperaceae*)

2. Leaves usually not grass-like, sometimes with linear blades but without a basal sheath; flowers various, commonly with colored petals and usually not hidden by surrounding bracts; stamens generally more than three.
4. Flowers small, in heads which simulate the appearance of a single flower; heads surrounded by 1 to several series of involucre bracts; seeds commonly with a cluster of bristles (pappus) at top.

### SUNFLOWER FAMILY (*Compositae*)

4. Flowers and seeds not as above.
5. A membranous sheath present, surrounding stem for a short distance above each node; seeds (achenes) 3-angled or flattened and pointed at tip.

### SMARTWEED FAMILY (*Polygonaceae*)

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\*These diagnoses are of general usefulness for categorizing the principal kinds of weeds or for contrasting the family groups to which they belong. The generalizations presented do not, however, hold true for all species and genera occurring in the United States. The more technical keys, as found in botanical manuals, are necessary if such an objective is to be achieved.

5. Membranous sheath not present; seeds usually rounded in outline, sometimes horse-shoe shaped.
6. Flowers with sharp-pointed bracts, inflorescence thus having a bristly appearance; seeds (of common weeds) shiny black.

PIGWEEED FAMILY (*Amaranthaceae*)

6. Flowers not possessing sharp bracts, inflorescence not bristly; seeds usually dull black or gray.

GOOSEFOOT FAMILY (*Chenopodiaceae*)

1. Fruit containing 2 to many seeds or if 1-seeded with trifoliate leaves.

7. Flowers irregular.

8. Plants with opposite, simple leaves; fruit splitting into 2 to 4 1-seeded segments (nutlets).

MINT FAMILY (*Labiatae*)

8. Plants with alternate, compound leaves; fruit a 1- to several-seeded pod.

BEAN FAMILY (*Leguminosae*)

7. Flowers regular or nearly so.

9. Fruit indehiscent, splitting into 2 to 4 1-seeded segments.

10. Leaves compound or dissected; flowers in umbels; fruit splitting into two segments.

CARROT FAMILY (*Umbelliferae*)

10. Leaves simple, serrate; flowers not in umbels; fruit usually splitting into four segments.

11. Leaves opposite; fruits not bristly.

VERVAIN FAMILY (*Verbenaceae*)

11. Leaves alternate; fruits commonly bristly.

BORAGE FAMILY (*Boraginaceae*)

9. Fruit various, not as above.

12. Leaves opposite or whorled.

13. Fruit 3-chambered; leaves slightly toothed.

SPURGE FAMILY (*Euphorbiaceae*)

(in part, see 17)

13. Fruit 1-chambered; leaves entire.

14. Flowers in umbels or umbel-like clusters; fruits exceeding 3 cm. in length; seeds flat with a long cluster of hairs; juice usually milky.

MILKWEED FAMILY (*Asclepiadaceae*)

14. Flowers not in umbels; fruits not more than 1.5 cm. in length; seeds neither flattened nor possessing a cluster of hairs; juice not milky.

PINK FAMILY (*Caryophyllaceae*)

12. Leaves alternate or in a basal cluster; fruit with more than one chamber.

15. Flowers with conspicuous, colored corollas of fused petals.

16. Plants vine-like, prostrate or twining (in species of the North Central States); fruit a capsule.

MORNING-GLORY FAMILY (*Convolvulaceae*)

16. Plants not vine-like; fruit a berry or capsule.

POTATO FAMILY (*Solanaceae*)

15. Flowers various, not as above.

17. Fruit a 3-chambered, 3-seeded capsule, juice commonly milky.

SPURGE FAMILY (*Euphorbiaceae*)

(in part, see 13)

17. Fruit not as above; plants not possessing milky juice.

18. Flowers greenish, in narrow spikes; leaves of common species all in a basal cluster.

PLANTAIN FAMILY (*Plantaginaceae*)

18. Flowers colored, not in spikes; stem leaves present.

19. Petals four; stamens six, free from one another; fruit 2-chambered.

MUSTARD FAMILY (*Cruciferae*)

19. Petals five; stamens fused by filaments into a tube surrounding style; fruit 3- to several-chambered.

MALLOW FAMILY (*Malvaceae*)

*Identification of Weeds From  
Flowers and Leaves*

