

68. Flower irregular, one of the petals of a different size and shape or color from all the other parts of the flower . . . . . ORCHIDACEAE, p. 468
68. Flower regular, either all the perianth-divisions of similar size and shape or each of the outer and inner series equal in size and shape. . . . . 69
69. Stamens 6; ovary superior with the petals or petal-like parts of the perianth attached below the base of the ovary . . . . . LILIACEAE, p. 418
69. Stamens 3; ovary inferior with the petals or petal-like parts of the perianth attached to the top of the ovary . . . . . IRIDACEAE, p. 458
64. Flower of either 4 or 5 (rarely up to 7) sepals or calyx-lobes and 4 or 5 (rarely 1-3 or 6-7) petals or corolla-lobes . . . . . 70
70. Separate ovaries or pistils in each flower 4 or more, unconnected or slightly connected with one another at the base . . . . . 71
71. Leaves fleshy and succulent; petals 4 or 5; sepals 4 or 5; stamens 8-10, inserted on the calyx rather than on the receptacle; pistils all on the same level, not spirally arranged . . . . . Sedum, in CRASSULACEAE, p. 770
71. Leaves not fleshy or succulent; petals 1-3 (up to 5); sepals 3 or 5; stamens 3-10 or more, inserted on the receptacle beneath the ovary; pistils spirally arranged, the tips of unequal height . . . . . Ranunculus, in RANUNCULACEAE, p. 683
70. Separate ovaries or pistils in each flower only 1 or 2 . . . . . 72
72. Petals separate, not united at their base, so that one petal may be removed without tearing the rest of the corolla . . . . . 73
73. Petals 4; sepals or sepal-lobes 4-6 . . . . . 74
74. Flowers irregular with the sepals unequal in size or shape and the petals unequal in size and shape; ovary open at the summit during the flowering period; stamens 12-40 . . . . . RESEDACEAE, p. 770
74. Flowers regular with the sepals equal in size or shape and the petals equal in size and shape; ovary closed during the flowering period; stamens 4, 6, or 8-12 . . . . . 75
75. Stamens 6; sepals distinct and separate, not connected at the base to form a tube; ovary superior, not united with the tube of the calyx, the petals arising below the base of the ovary . . . . . CRUCIFERAE, p. 728
75. Stamens 4 or 8-12; sepals united into a tube; ovary inferior, united with the tube of the calyx, the petals, if present, arising from the top of the calyx-tube and ovary . . . . . ONAGRACEAE, p. 1093
73. Petals 3 or 5-7; sepals or calyx-lobes 5-7 . . . . . 76
76. Stamens 10 or more in a flower . . . . . 77
77. Small, narrow scale-like stipules usually appearing at base of leaves. . . . . LEGUMINOSAE, p. 865
77. No leaf-stipules present at base of leaves . . . . . 78
78. Flowers close together in a many-flowered narrow elongate inflorescence (spike); ovary open at the summit during the flowering period. RESEDACEAE, p. 770
78. Flowers well-separated in a few-flowered loosely spreading inflorescence (raceme-like corymb); ovary closed during the flowering period. . . . . Helianthemum, in CISTACEAE, p. 1066
76. Stamens 4-8 in a flower. . . . . 79
79. Calyx with the sepals united into a prominent cylindrical tube with 5-7 short teeth at the summit. . . . . Lythrum, in LYTHRACEAE, p. 1090
79. Calyx of separate prominent sepals more or less distinct to the base and not united into a cylindrical tube . . . . . 80
80. Flowers greenish, situated along the sides of the stem at the base of the leaves; narrow thread-like or linear-lanceolate stipules present at base of leaves . . . . . Hybanthus, in VIOLACEAE, p. 1068
80. Flowers yellow, blue, pink, rose, lavender, purplish, or white, rarely greenish, situated in few- or many-flowered inflorescences at the ends of branches or in the upper half of the plant; stipules absent . . . . . 81
81. Stamens 5, separate from one another, the filaments not united; styles 5; flowers regular, sepals all alike, petals all alike . . . . . LINACEAE, p. 957
81. Stamens 6 or 8, their filaments united into a sheath at the base; style 1; flowers irregular, the 2 inner sepals petal-like and different from the 3 other green sepals, the petals also not alike . . . . . POLYGALACEAE, p. 969

- 72. Petals united into a short or long tube so that one part cannot be removed without disturbing or tearing a neighboring section . . . . . 82
- 82. Ovaries 2 and separate in each flower, but the stigmas united (4-lobed ovaries of Boraginaceae, appearing almost like 4 separate ovaries should be looked for in alternate 82); stamens and stigma of a specially modified form differing from the usual type, the anthers attached to the stigma, and the pollen borne in special waxy masses . . . . . ASCLEPIADACEAE, p. 1200
- 82. Ovary 1 in each flower (sometimes the deeply 4-lobed ovary of Boraginaceae appears almost like 4 separate ovaries); anthers not attached to the stigma but sometimes forming a ring or tube around the stigma, the pollen not borne in special waxy masses . . . . . 83
- 83. Stamens 6 or 8; the 2 inner sepals petal-like . . . . . POLYGALACEAE, p. 969
- 83. Stamens 4 or 5; all the calyx-divisions green or at least not petal-like . . . . . 84
- 84. Ovary inferior, united with the calyx-tube, the top of the ovary below the base of the corolla-tube . . . . . CAMPANULACEAE, p. 1428
- 84. Ovary superior, free from and not united with the calyx-tube, the base of the corolla-tube situated below the base of the ovary . . . . . 85
- 85. Stamens inserted opposite the corolla-lobes; ovary 1-celled . . . . . PRIMULACEAE, p. 1164
- 85. Stamens inserted alternate with the corolla-lobes; ovary 2-celled or sometimes appearing (falsely) 4-celled because of the deep lobes or false partitions . . . . . 86
- 86. Ovary deeply 4-lobed, almost appearing like 4 separate ovaries. BORAGINACEAE, p. 1242
- 86. Ovary not 4-lobed . . . . . 87
- 87. Corolla irregular, 2-lipped into upper and lower portions, or the lobes of the corolla unequal in size and shape . . . . . SCROPHULARIACEAE, p. 1328
- 87. Corolla regular, the lobes or divisions equal or nearly so in size and shape . . . . . 88
- 88. Plants growing in water, or in swampy or wet ground; spines usually present at the base of the leaves . . . . . Hydrolea, in HYDROPHYLLACEAE, p. 1240
- 88. Plants usually of dry ground; no spines present . . . . . 89
- 89. Ovules 4 in each ovary; seeds 4 in each fruit. CONVOLVULACEAE, p. 1212
- 89. Ovules many in each ovary; seeds many in each fruit . . . . . 90
- 90. Inflorescence a long dense cylindrical spike with crowded flowers; stem winged by leafy tissue extending from the base of the leaves; leaves and stem densely woolly. . . . . Verbascum Thapsus, in SCROPHULARIACEAE, p. 1339
- 90. Inflorescence with solitary or loosely arranged flowers not occurring in a long dense spike; stem not winged by leafy tissue; leaves and stem often hairy, but not densely woolly . . . . . SOLANACEAE, p. 1310

Section 14. **Herbaceous or nonwoody plants with alternate, simple toothed or lobed leaves or margins of leaves not completely entire**

- a. Plants without true flowers or seeds, reproducing by green or brown spores (without embryos) contained in sporangia and located on the lower portions of the leaf (frond) or in specially modified leaves (fronds), stalks, or branches . . . . . FERNS AND FERN ALLIES, p. 2
- a. Plants with true flowers bearing stamens or carpels (pistils) or both, reproducing by seeds containing embryos . . . . . b
- b. What appears to be one flower actually is a dense mass of small flowers surrounded by green or colored scales or bracts of the involucre; anthers united into a tube or rarely scarcely united; petals united into a tube; ovary inferior; ovule and seed 1 in each of the individual flowers. . . . . COMPOSITAE, p. 1442
- b. Without the above combination of characters . . . . . c
- c. Plants with stems vining, twining, climbing, sprawling, or trailing on the ground or over other plants or supports . . . . . d
- d. Margins of leaves with teeth, and with or without lobes . . . . . e
- e. Tendrils (slender coiling or twisting appendages) present on some part of plant . . . . . f
- f. Stipules present at base of leaf-stalks in the form of small hair- or thread-like appendages or outgrowths; flower white and purple, large and showy, 5-8 cm. across, with 5 large separate petals not united at their base . . . . . PASSIFLORACEAE, p. 1083

- f. Stipules absent or disappearing as the leaf matures; flowers either small, inconspicuous, greenish, whitish, yellowish, or orange, or if large, the petals all united at the base. . . . . g
- g. Calyx with well-developed calyx-tube and calyx-lobes; corolla with the petals united at base into a short or long tube, the corolla persisting during and slightly after flowering (anthesis); stamens usually 3, the anthers usually united or cohering, sometimes free; ovary inferior, united with the calyx-tube, and situated below the base of the corolla; some of the corolla united with calyx-tube . . . . . Cucurbitaceae, p. 1422
- g. Calyx very small and without a developed calyx-tube and calyx-lobes; corolla with the petals either all free, separate, and not united, or, if united at the tip, then falling quickly during flowering; stamens 5, the anthers free and not uniting; ovary superior, not united with the calyx and located above the insertion of the stamens, petals, and calyx; corolla and calyx not united . . . . . Vitaceae, p. 1031
- e. Tendrils absent from all parts of plant . . . . . h
- h. At least the lower part of leaf-blade and the leaf-stalk (petiole) with some star-shaped (stellate) hairs; stems climbing or attaching themselves by aerial roots . . . . . Hedera, in Araliaceae, p. 1114
- h. Hairs simple when present on lower surface of blade or on leaf-stalk; stems not climbing or attaching themselves by aerial roots. . . . . i
- i. Leaf-stalks 1-4 mm. long . . . . . Kickxia, in Scrophulariaceae, p. 1350
- i. Leaf-stalks usually more than 4 mm. long . . . . . j
- j. Leaves rounded-heart-shaped, round at summit, 1-3 (-3.5) cm. long. . . . . Cymbalaria, in Scrophulariaceae, p. 1350
- j. Leaves not as above, short- to long-pointed at summit, 3-20 cm. or more long . . . . . k
- k. Leaves thin, palmately nerved with 5 or more main nerves arising from the same point at the base of the leaf-blade, slightly hairy on the nerves of the lower surface; stem easy to tear or break . . . . . Calycocarpum, in Menispermaceae, p. 716
- k. Leaves thick, pinnately nerved with 1 main central midrib and several pairs of side (lateral) nerves arising from the midrib, glabrous (without hairs) on the lower surface; stem tough, difficult to tear or break . . . . . Berchemia, in Rhamnaceae, p. 1027
- d. Margins of leaves without teeth, but somewhere with lobes . . . . . l
- l. Tendrils (slender coiling or twisting appendages) present on some part of plant . . . . . m
- m. Stipules present at base of leaf-stalk in the form of short hair-like appendages or outgrowths; corolla of separate petals, not united at their base. . . . . Passifloraceae, p. 1083
- m. Stipules absent; corolla of united petals, so that one portion cannot be removed without tearing or disturbing a neighboring section. . . . . Cucurbitaceae, p. 1422
- l. Tendrils absent from all parts of the plant. . . . . n
- n. Stipules in the form of a thin tissue-like tubular sheath (ocrea) surrounding the stem at the base of the leaf-stalk . . . . . Polygonum, in Polygonaceae, p. 582
- n. Stipules either absent or not as above . . . . . o
- o. Flowers funnelform to broadly bell-shaped, 1.5-8 cm. long, white, blue, purple, pink, or rose-red; bruised stem or leaf-stalk and sometimes the leaf-blade producing milky juice . . . . . Convolvulaceae, p. 1212
- o. Flowers not funnelform or bell-shaped, 0.5-1.3 cm. long; no milky juice produced by bruised stem or leaf-stalks. . . . . p
- p. Leaf-stalks 1-4 mm. long . . . . . Kickxia, in Scrophulariaceae, p. 1350
- p. Leaf-stalks longer, usually more than 4 mm. long . . . . . q
- q. Corolla purple, the petals joined into a short tube so that the attempt to remove one portion disturbs the neighboring section of the corolla; bruised plant with a rank fetid odor; fruit a many-seeded berry . . . . . Solanum Dulcamara, in Solanaceae, p. 1311
- q. Corolla greenish, white, or greenish-white, the petals, if present, separate to the base, not connected, so that one petal can be removed without tearing or disturbing the other petals; bruised plant lacking a rank fetid odor; fruit a 1- or 2-seeded drupe. . . . . r
- r. All the leaf-blades as broad as or broader than long. . . . . Menispermaceae, p. 714
- r. Some or all of the leaf-blades longer than broad. . . . . s
- s. Lower surface or nerves on lower surface of leaf more or less hairy; stem easily broken or torn; stamens, when present, 6 or 12; mature fruit 1-seeded . . . . . Menispermaceae, p. 714
- s. Lower surface of leaves glabrous (without hairs); stem tough, difficult to break; stamens 5; mature fruit 2-seeded . . . . . Berchemia, in Rhamnaceae, p. 1027

- c. Plants with stems upright, spreading, or hanging, but not vining, twining, climbing, or trailing . . . *t*
- t. Leaves reduced to minute scattered traps or scales lying upon or under the damp ground; calyx with 2 lobes united at base . . . LENTIBULARIACEAE, p. 1375
- t. Without the above combination of characters; leaves well-developed or at least not reduced to traps or scales; calyx with 3-5 or 10 lobes or 2-6 separate, distinct sepals . . . *u*
- u. Stipules in the form of a thin tissue-like tubular sheath (ocrea) surrounding the stem at the base of the leaf-stalk . . . Polygonum tenue, in POLYGONACEAE, p. 587
- u. Stipules either absent or not as above . . . *v*
- v. Leaves peltate, the leaf-stalk attached to the lower surface of the leaf-blade near the center of the blade. . . Ricinus, in EUPHORBIACEAE, p. 982
- v. Leaves not peltate, the leaf-stalk joining the leaf-blade at its lower end or leaves attached directly to the stem without any leaf-stalk (sessile). . . *w*
- w. Flowers with the stamens and pistils separated in different flowers on the same plant (monoecious) or different plants (dioecious). . . *x*
- x. Stipules present at base of leaf-stalks in the form of very small, narrow, scale- or hair-like appendages or outgrowths, or if stipules are absent, then the plant with either stinging hairs present or 1 or 2 cup-shaped glands occur at base of leaf-blade . . . *y*
- y. Style 1 in the pistil-bearing flower; ovary 1-celled; fruit 1-seeded; stamens 5 in the stamen-bearing flower . . . Laportea, in URTICACEAE, p. 568
- y. Styles 3 and each branched in the pistil-bearing flower; ovary 3-celled; fruit 3-seeded; stamens either 3-5 or 8-16 in the stamen-bearing flowers . . . EUPHORBIACEAE, p. 973
- x. Without any of the characters of the preceding x; stipules absent and plants without stinging hairs or cup-shaped glands at base of leaf-blade . . . *z*
- z. Most of leaves finely dissected into hair- or thread-like divisions or segments; plants completely glabrous (without hairs); stamens 4 in the stamen-bearing flowers; ovary inferior, united with the calyx, 4-celled; fruit 4-lobed, with 4 seeds. Myriophyllum, in HALORAGIDACEAE, p. 1108
- z. Leaves not finely dissected into thread-like segments, but if deeply cut the plants then often covered with hairs, glands, or mealy scurfiness; stamens 3-5 in the stamen-bearing flowers; ovary superior, not united with nor inserted above the calyx, 1-celled; fruit with 1 seed . . . CHENOPODIACEAE, p. 600
- w. Flowers perfect with the stamens and pistils in the same flower (the genus *Euphorbia* should be keyed here) . . . *i*
- i. Bruised stem, leaf-stalk, or leaf-blade producing milky juice; flowers surrounded by an involucre in a cup-shaped cyathium; the cup-shaped involucre with 1-5 glands, with or without colored or petal-like appendages on the margin; a stalked 3-lobed ovary with 3 styles, each 2-cleft, projects from center of flower . . . Euphorbia, in EUPHORBIACEAE, p. 984
- i. Without the above combination of characters; plants with or without milky juice; flowers not as above . . . *2*
2. Stamens 3; calyx-tube 3-sided; petals none; flowers greenish, in the leaf-axils; plants of swamps and swampy ground . . . Proserpinaca, in HALORAGIDACEAE, p. 1111
2. Without the above combination of characters; stamens 2, 4, 5, 6, 8-10 or more; calyx various; petals absent or present; flowers of various colors; plants of wet or dry ground . . . *3*
3. Separate ovaries or pistils in each flower 3 or more and unconnected or somewhat connected with one another at the base during the flowering period (anthesis) (4-lobed ovaries of Boraginaceae appearing almost like separate ovaries should be keyed out in alternate 3) . . . *4*
4. Stamens 5-10 (rarely 12) . . . *5*
5. Leaves very thick, fleshy, and succulent; flowers rose or red-purple . . . CRASSULACEAE, p. 770
5. Leaves of papery or membranous texture, not fleshy nor succulent; flowers yellow-green . . . Penthorum, in SAXIFRAGACEAE, p. 774
4. Stamens many, more than 12 . . . *6*
6. Filaments of stamens united into a tube; star-shaped (stellate) hairs commonly present on some part of plant; ovaries arranged in a ring or circle . . . MALVACEAE, p. 1044

6. Filaments of stamens separate, not united into a tube; star-shaped (stellate) hairs not present on plant; ovaries spirally arranged or not in a ring . . . . . 7
7. Leaf-like stipules 1–2 cm. long at base of leaf and not united with the leaf-stalk or leaf-blade; styles abruptly hooked or S-bent above the middle; petals and stamens inserted at or near the edge of a saucer-shaped calyx-tube (hypanthium), the sepals united into a tube . . . . .  
Geum, in ROSACEAE, p. 831
7. Stipules absent or in the form of dilated appendages attached to the base of the leaf-blade or leaf-stalk (petiole); styles straight or curved, but not S-bent or hooked; petals, when present, and stamens inserted directly on the receptacle together with the sepals, the sepals not united into a tube but separate to their base . . . . . RANUNCULACEAE, p. 672
3. Only 1 or 2 separate ovaries or pistils in each flower (4-lobed ovaries of Boraginaceae appearing almost like separate ovaries are keyed in this section) . . . . . 8
8. Separate ovaries or pistils in each flower 2, remaining separated from the beginning of the flowering period (anthesis) . . . . . SAXIFRAGACEAE, p. 773
8. Only 1 ovary or pistil in each flower from the beginning of the flowering period (anthesis), but the upper part of the pistil may separate into distinct and separate units corresponding to the number of carpels present . . . . . 9
9. Upper half of pistil showing 5 or more distinct and separate beaks or tips corresponding to the number of carpels present . . . . . 10
10. Filaments of stamens united into a column or tube; star-shaped hairs commonly present on some part of plant . . . . . MALVACEAE, p. 1044
10. Filaments of stamens free, not united into a tube; no star-shaped hairs present . . . . . 11
11. Petals 5, lavender, rose-purple, lilac, or whitish; calyx divided into distinct sepals not united at their base . . . . . GERANIACEAE, p. 962
11. Petals absent or rarely present, the flowers yellowish-green, turning orange-red in fruit; calyx deeply parted, but the segments connected at the base . . . . .  
Penthorum, in SAXIFRAGACEAE, p. 774
9. Upper half of pistil showing as 1–4 tips . . . . . 12
12. Stamens 16–24 or more . . . . . 13
13. Corolla irregular, some of the petals unequal in size and shape from the others and prolonged at one end into a pointed slender spur . . . Delphinium, in RANUNCULACEAE, p. 679
13. Corolla regular, the petals all equal in size and shape . . . . . 14
14. Filaments of stamens united into a column or tube . . . . . MALVACEAE, p. 1044
14. Filaments of stamens free, not united into a tube . . . . . 15
15. Leaves sticking easily to cloth or skin; broken parts of plant not producing milky, yellow, or orange juice; sepals united into a tube; ovary inferior, united with calyx-tube, the petals arising from the summit of the ovary . LOASACEAE, p. 1084
15. Leaves not sticking to cloth or skin; broken parts of plant producing a milky, yellow, or orange juice; sepals free and separate to their base; ovary superior, free from the calyx, and inserted above the base of the petals. PAPAVERACEAE, p. 719
12. Stamens 1–10 . . . . . 16
16. Stamens 6, 8, or 10 . . . . . 17
17. Petals absent . . . . . non-petalous forms of CRUCIFERAE, p. 737, 743–744 (728–768)
17. Petals present . . . . . 18
18. Petals 3, irregular, not all equal in size and shape; sepals irregular, the 2 inner ones colored and petal-like, the 3 outer ones smaller and green; filaments of stamens united at base into a sheath or tube . . . . . POLYGALACEAE, p. 969
18. Petals 4 or 5, regular, equal in size and shape; sepals or calyx-lobes regular, equal in size and shape; filaments of stamens free and not united into a tube . . . . . 19
19. Stamens 6 . . . . . CRUCIFERAE, p. 728
19. Stamens 8 or 10 . . . . . 20
20. Stipules (small scale- or leaf-like appendages or outgrowths) present at base of leaf-stalks; petals 5; calyx divided into separate and distinct 5 sepals; ovary superior, the base of the ovary inserted above the base of the petals . . . . . GERANIACEAE, p. 962
20. Stipules absent; petals 4; the 4 sepals united into a calyx-tube and calyx-lobes; ovary inferior, united with calyx-tube, the petals arising from summit of calyx-tube and ovary . . . . . ONAGRACEAE, p. 1093
16. Stamens 1–5 . . . . . 21

21. Corolla absent at flowering time, only a calyx present . . . . . 22
22. Stipules (leaf-like or scale-like appendages or outgrowths) present at base of leaf-stalks. . . . .  
cleistogamous forms of *Viola*, in VIOLACEAE, p. 1069
22. No stipules present. . . . . 23
23. Sepals 4; style 1; ovules numerous in the ovary; seeds numerous in the fruit . . . . .  
*Rorippa*, in CRUCIFERAE, p. 758
23. Sepals or calyx-lobes 1-5; styles 2 or 3; ovule 1 in the ovary; seed 1 in the fruit . . . . .  
CHENOPODIACEAE, p. 600
21. Corolla present at flowering time . . . . . 24
24. Corolla of separate petals, not united at the base, so that one petal may be removed without tearing or disturbing the rest of the corolla . . . . . 25
25. One end of flower prolonged into a curved comma-shaped, slender spur; petals 2 or 3, 2 of them 2-lobed; stem hollow with watery juice . . . . . BALSAMINACEAE, p. 1024
25. Flower without a spur, or ending in a blunt knob-like sac which is not curved or comma-shaped; petals 5; stem, if hollow, without a watery juice . . . . . 26
26. Main leaves or leaf-nodes on the stem numerous, more than 10; petals opposite the stamens . . . . . *Ceanothus*, in RHAMNACEAE, p. 1028
26. Main leaves or leaf-nodes on the stem fewer, mostly 1-10; petals alternate with the stamens . . . . . 27
27. Loose leaf- or scale-like stipules present and conspicuous at base of leaf-stalk; petals showy, conspicuous, 7-15 mm. or more long; stamens closely surrounding the ovary; corolla with a knob-like spur at one end . . . . . VIOLACEAE, p. 1068
27. Stipules absent or very inconspicuous, if present, the base of the leaf-stalk sometimes with a dilated thin margin; petals small, inconspicuous, at most 3 mm. long; filaments of stamens spreading or remote from ovary; corolla without a knob-like spur at one end . . . . . 28
28. Ovary superior, free from the calyx, the petals arising below the insertion or base of the ovary; sepals 4; stamens 4. . . . . *Rorippa*, in CRUCIFERAE, p. 758
28. Ovary partly to completely inferior, the petals arising either from the summit of the ovary or between the calyx-lobes; calyx either greatly reduced to 5 minute teeth or lobes, or the calyx conspicuous and elongated into a tube with 5 lobes; stamens 5. . . . . 29
29. Plant completely glabrous; calyx greatly reduced, the teeth or lobes minute; ovary with 2 ovules; fruit 2-seeded; ovary completely inferior, the petals arising from the summit of the ovary . . . . . UMBELLIFERAE, p. 1115
29. Some part of leaf-blade, leaf- or flower-stalk, or inflorescence more or less hairy; calyx conspicuous and elongated into a calyx-tube (hypanthium) and lobes; ovary with many ovules; fruit many-seeded; ovary partly inferior, partly united with the lower portion of the ovary, the petals arising between the calyx-lobes . . . . .  
*Heuchera*, in SAXIFRAGACEAE, p. 776
24. Corolla of united petals joined at least at the base, forming a short or long tube, so that one part of the corolla cannot be removed without tearing or disturbing a neighboring section . . . . . 30
30. One end of flower prolonged into a curved, comma-shaped, slender spur; petals 2-3, 2 of them 2-lobed; stem hollow with watery juice. . . . . BALSAMINACEAE, p. 1024
30. Flower without a spur or the spur, if present, straight; corolla-lobes 4 or 5; stem usually solid. . . . . 31
31. Stamens with 4 fertile (pollen-bearing) anthers . . . . . 32
32. Placentae (where the ovules or seeds are attached) of the ovary or fruit axil (situated in the center); commonly encountered plants . . . SCROPHULARIACEAE, p. 1328
32. Placentae (where the ovules or seeds are attached) of the ovary or fruit parietal (situated on the wall); rarely encountered . . . . . 33
33. Flowers and fruits borne next to the main stem at the base of the leaves (axillary); leaf-blades lanceolate or oblong-ovate; corolla 2-2.5 cm. long; fruit erect, ellipsoid, without any curved beaks, 2.5-3 cm. long . . . PEDALIACEAE, p. 1371
33. Flowers and fruits borne at the top of the stem and branches (terminal); leaf-blades somewhat round and heart-shaped; corolla 3-5 cm. long; fruit with 2 spreading, curved horned beaks, 8-15 cm. long. . . MARTYNIACEAE, p. 1372
31. Stamens with 5 fertile (pollen-bearing) anthers . . . . . 34

34. Ovary inferior, united with the calyx-tube, the corolla-tube arising from the summit of the ovary; bruised stem or leaf-stalk usually producing milky juice . . . . . CAMPANULACEAE, p. 1428
34. Ovary superior, free from the calyx, the corolla-tube arising below the insertion or base of the ovary; bruised stem or leaf-stalk usually not producing milky juice . . . . . 35
35. Ovary deeply 4-lobed, almost appearing like 4 separate ovaries . . . . . BORAGINACEAE, p. 1242
35. Ovary not 4-lobed . . . . . 36
36. Corolla yellow or yellow with brown or purple-brown center . . . . . 37
37. Plants with prickles . . . . . Solanum, in SOLANACEAE, p. 1311
37. Plants without prickles . . . . . 38
38. Corolla-tube very short, much shorter than the corolla-lobes; filaments of the stamens conspicuously purple-hairy; calyx divided nearly to the base, practically with no tube present . . . . . Verbascum Blattaria, in SCROPHULARIACEAE, p. 1339
38. Corolla-tube or united part of corolla conspicuous, much longer than the slightly lobed or toothed border; filaments of the stamens mainly without hairs, sometimes slightly hairy with white hairs; calyx lobed only part way, with an evident tube . . . . . Physalis, in SOLANACEAE, p. 1314
36. Corolla white, blue, lavender, purple, or rose-red . . . . . 39
39. Ovary 1-celled . . . . . HYDROPHYLLACEAE, p. 1233
39. Ovary 2-5-celled . . . . . 40
40. Filaments of the stamens conspicuously purple-hairy for most of their length . . . . . Verbascum Blattaria, in SCROPHULARIACEAE, p. 1339
40. Filaments of the stamens either without hairs or with hairs only at very base of filament, but not conspicuously purple-hairy . . . . . 41
41. Anthers touching, coming together and forming a tube around the style; filaments very short, usually much shorter than the anther. . . . . Solanum, in SOLANACEAE, p. 1311
41. Anthers more or less separated from one another, not touching nor forming a tube around the style; filaments usually as long as or longer than the anthers . . . . . 42
42. Flowers or clusters of flowers at the ends of the stems or branches; leaf-margins toothed and angled; ovary containing numerous ovules; fruit containing numerous seeds . . . . . SOLANACEAE, p. 1310
42. Flowers arising along the sides of the stem (laterally) from the axils of the leaves; leaf-margins mainly without teeth or angles, the lobes extending mainly from the base of the leaf-blade; ovary containing 4-6 ovules; ovary containing 4-6 seeds . . . . . CONVULVACEAE, p. 1212