

April - 1983



Spring  
Wildflowers  
of  
Roan Mountain

Ron D. Vance

## BOTANY

### Meaning of Common Specific Names

acaulis- stemless	candidus- white, shining
acicularis- needlelike	capillaris- hair-like
aduncus- hooked	carinatus- keeled
aestivalis- summer	caudatus- tailed
affinis- related	cerifera- wax bearing
alatus- winged	cernuus- drooping
albicans- whitish	chloranthus- green-flowered
altissimus- very tall	chrysophyllos- golden leaved
amabilis- lovely	chrysostomus- golden-mouthed
amarus- bitter	cinctus- girdled
ambigens- ambiguous	clandestinus- concealed
amoenus- charming stems	coarctatus- ascending, appressed
amplexicaulis- clasping	coccineus- scarlet
anceps- two-headed or edged	comatus- with hair
angustatus- narrow	communis- gregarious
annotinus- year-old	commutatus- changing
aphyllus- leafless	concinus- near
apiculatus- tipped with a point	concolor- colored similarly
appendiculatus- appendaged	confertus- crowded
applanatus- flattened	confinus- bordered
arcuatus- bow-like	conoides- cone-like
areolatus- arcolate, pitted	contortus- contorted
argentus- silvery	crassifolius- thick leaved
argutus- sharp-tooted	coronarius- used with garlands
argyreus- silvery	corniculatus- horned
aridus- arid	crassipes- thick footed
arifolius- arrow-leaved	crinitus- hairy
arundinaceous- tree-like	cristatus- crested
asper- rough	cyanous- blue
atrasus- blackened	
atropurpureus- dark purple	dasycarpous- thick fruited
atrosanguineus- dark blood-red	dasystachys- thick-spike
aurantiacus- orange-red	debilis- weak
aureus- golden	<del>dehiscens</del> decapetalous- ten-petaled
australis- southern	decepiens- deceptive
azureus- sky blue	decorus- elegant
	decumbens- reclining
baccatus- berried	deflexus- bent downward
bifidus- twice cut	demissus- low, weak
borealis- northern	dimidiatus- halved
brachycarpus- short fruited	discolor- different colors
brevipes- short footed	dulcis- sweet
brunneus- deep brown	dumosus--bushy
bufonius- pertaining to the toad	
	eburneus- ivory white
caeruleus- dark blue	echinatus- prickly
caesius- bluish gray	edulis- edible
calvus- bald, hairless	effusus- loose-spread
calcinus- calyx-like	elatior- taller
candicans- white-hoary	elatus- tall
caninus- catting	ensifolius- sword leaved



eriocarpus- woolly fruit  
 erubescens- burning  
 esculentus- edible  
 exiguus- little, poor

fallax- deceptive  
 farinosus- mealy  
 fasciculotus- fascicled  
 fastigiatus- erect and close together  
 fifipes- thread-like stalks  
 fistulosus- hollow cylindrical  
 flabellatus- fan-like parts  
 flagillaris- whip-like  
 flavescens- yellowish  
 flavus- yellow  
 flexilis- pliant  
 floribundus- free-flowered  
 floridus- flowering  
 flottans- floating  
 foliosus- leafy  
 formosus- beautiful  
 fontanus- fronsus  
 fulgens- shining  
 furcatus- forked

geniculatus- jointed  
 gracilis- slender  
 graecizans- greek  
 gramineus- grassy  
 graveolens- heavy scented

hebecarpus- pubescent-fruited  
 heveolus- pale-yellow  
 hirta- hairy  
 holo-sericeus, woolly-silky  
 humifusus- sprawling  
 humilis- dwarf  
 hyemalis- of winter  
 hyperboreus- far northern  
 hypogaeus- underground  
 hypoglaucus- glaucous beneath  
 hystrix- bristly

incanus- hoary  
 inermis- unarmed  
 intumeszens- tumid, enlarged

junceus- rush-like

lactatus- milky  
 laevigatus- smooth  
 laevipes- smooth-footed  
 laevis- smooth

lanuginosus- woolly  
 leiocarpus- smooth-fruited  
 leptocladus- thin-stemmed  
 leptophyllus- thin-leaved  
 leucanthus- white flowered  
 longipes- long-footed  
 lucidus- bright, clear  
 lupulinus- hop-like  
 luteolus- yellowish

macilentus- lean  
 macranthus- large-flowered  
 maculatus- spotted  
 majalis- maytime  
 maritimus- of the sea  
 megarrhizus- large-rooted  
 micranthus- small flower  
 macracarpus- large-flower  
 macrophyllus- large-leaved  
 medius- intermediate  
 millefolius- very many leaved  
 mirabilis- wonderful  
 modestus- modest  
 millis- soft  
 moniliformis- constricted at regular intervals  
 monocephala- single-headed  
 monoicus- monoecious  
 monostachyus- single-spike  
 multifidus- many times parted  
 muralis- of walls  
 mutabilis- variable

nanus- dwarf  
 natans- floating  
 neodioica- nearly dioecious  
 nictitans- blinking  
 nigricans- black  
 nitens- shining  
 nivalis- snowy  
 niveus- snowy  
 novae-angliae- of New England  
 novybracensis- of New York  
 nudicaulis- naked stemmed  
 novae-belgii- of New York  
 Nutans- nodding

occidentale- western  
 ochroleusus- yellowish-white  
 oliganthus- few-flowered  
 oligocarpus- few-fruited  
 oligospermus- few-seeded  
 operculatus- with a lid



orientalis- eastern  
 ornatus- adorned  
 orthocarpus- straight fruit  
 orthopteris- straight winged  
 ovinus- of sheep  
 oxycanthus- sharp-spined

parviflora- small flowered  
 parvifolius- small-leaved  
 parvulus- very small  
 patens- spreading  
 pauciflorus- few flowered  
 pauperculus- poor  
 pectinatus- comb-like  
 pentandrous- five stamens  
 perennans- perennial  
 peregrinus- exotic  
 plantaginous- plantain-like  
 platycarpus- broad fruited  
 platycladus- broad branched  
 platyphyllus- broad leaved  
 plumarius- plumed  
 pedecarpus- with stalked fruit  
 polyanthus- many flowered  
 polystachyus- many spiked  
 porcinus- of swine  
 praecox- very early  
 prasinus- grass green  
 procera- tall  
 psilostachys- naked spike  
 pulchellus- pretty  
 pulchra- pretty  
~~pusillus~~ pumila- dwarf  
 pungens- piercing, sharp  
 pusillus- very small, insignificant  
 pycnanthus- densely flowered

quadrifolius- divided into four parts

ramosus- branched  
 repens- creeping  
 retroflexus- reflexed  
 ringens- gaping, open-mouthed  
 rostratus- rostrate, beaked  
 rubellus- reddish  
 rubiginosus- rusty  
 rufus- red, rusty  
 rusticus- rustic

sapientus- of the wise men  
 sativus- cultivated  
 scandens- climbing  
 sclerophyllus- hard-leaved  
 scoparius- broom-like

sensibilis- sensitive  
 septentrionalis- northern  
 serotinus- late-flowering  
 serpens- creeping  
 serpyllifolius- thyme-leaved  
 setaceus- bristle-like  
 spectabilis- spectacular  
 speciosus- showy, good-looking  
 squarrosus- with parts recurved at  
 the ends.  
 stans- erect  
 stenophyllus- narrow-leaved  
 strictus- strict, upright

tectorum- of roofs, or houses  
 tenellus- slender, tender, soft  
 tenarum- " " " "  
 tenuis- slender, thin  
 teres- terete  
 ternatus- in threes  
 tetrapteris- 4-winged  
 tetrastachyus- 4-spiked  
 thyrsiflorus- thyrst flower  
 tinctorius- of dyes  
 tricoccus- three-lobed  
 tridentis- 3-toothed  
 trifidus- 3-parted  
 triptaria- 3-winged  
 tristis- sad, dull at points

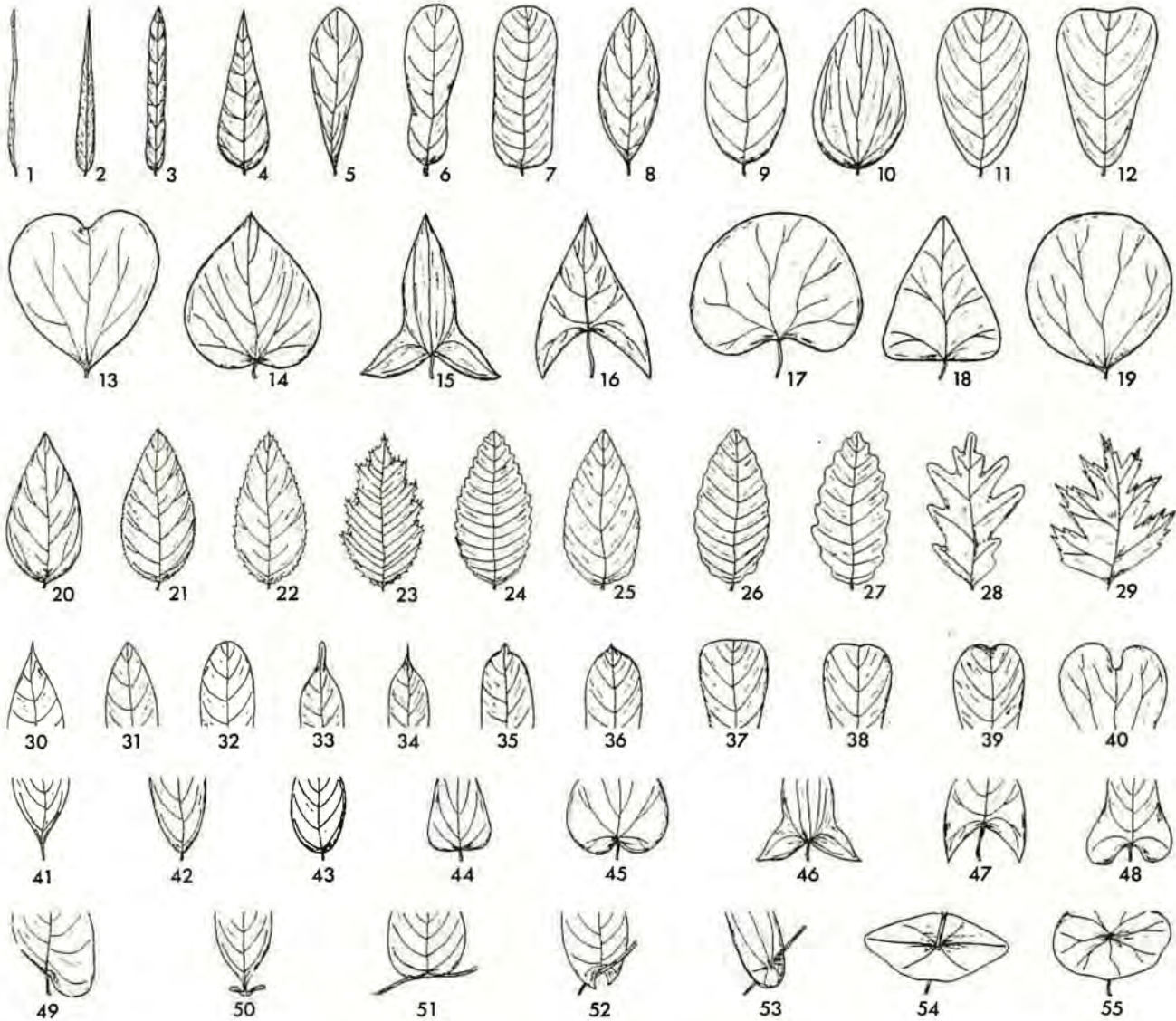
uncinatus- hook  
 unguiculatus- clawed  
 urens- burning  
 ursinus- of bears  
 usitatissimus- most useful  
 vaginatus- sheathed  
 validus- strong  
 velutinus- velvety  
 venosus- veined  
 vernus- of spring  
 vernalis- vernal  
 versicolor- variously colored  
 vespertinus- western  
 vestitus- covered  
 vimineus- of osiers or wicker-work  
 vinealis- of vineyards  
 virens- green, viridis  
 vulgaris- common  
 vulpinus- of the fox

xanthocarpus- yellow-fruited

vorgatis- twiggy



# LEAF TYPES



## SHAPES

1. Acicular
2. Subulate
3. Linear
4. Lanceolate
5. Oblanceolate
6. Spatulate
7. Oblong
8. Elliptical
9. Oval
10. Ovate
11. Obovate
12. Cuneate
13. Obcordate
14. Cordate
15. Hastate

## 16. Sagittate

17. Reniform
18. Deltoid
19. Orbiculate

## MARGINS

20. Entire
21. Serrulate
22. Serrate
23. Doubly serrate
24. Dentate
25. Crenate
26. Undulate
27. Sinuate
28. Lobed
29. Incised

## TIPS

30. Acuminate
31. Acute
32. Obtuse
33. Caudate
34. Aristate
35. Cuspidate
36. Mucronate
37. Truncate
38. Retuse
39. Emarginate
40. Obcordate

## BASES

41. Acuminate
42. Acute
43. Rounded
44. Truncate
45. Cordate
46. Hastate
47. Sagittate
48. Auriculate
49. Oblique
50. Stipulate
51. Sessile
52. Clasping
53. Perfoliate
54. Connate
55. Peltate



Carolina Biological Supply Company, Burlington, North Carolina 27215  
and Powell Laboratories, Gladstone, Oregon 97027

Printed in U.S.A. © 1966 Carolina Biological Supply Company

Review Sheet

114

4



## GENERAL CHARACTERISTICS OF SOME COMMON PLANT FAMILIES

Unless indicated otherwise most of the species in the following families have superior ovaries.

1. Gramineae- (Grass family). Examples: Blue grass, Wheat. Stems usually hollow, cylindrical; linear leaves, 3 ranked, sheaths split; prominent nodes and internodes.
2. Cyperaceae- (Sedge family). Examples: Sedges, Nut-rush. Stems usually solid, triangular; leaves grass-like, parallel veined, 3 ranked, sheaths closed (not split).
3. Liliaceae- (Lily family). Examples: Lilies, onions, Yucca. Usually herbaceous; vascular bundles scattered; leaves entire, usually parallel veined; flower parts in 3's or 6's, usually regular (actinomorphic); plants often bulbous.
4. Salicaceae- (Willow family). Examples: Poplars, Willows. Trees or shrubs; dioecious, flowers in catkins, fruits with tuft of cottony hairs; leaves simple, alternate.
5. Juglandaceae- (Walnut family). Walnut, Hickory. Trees, with alternate, pinnately compound leaves; fruit, walnut enclosed in a husk, pith diaphragmed.
6. Betulaceae- (Birch family). Examples: Birch, Blue-beech, Hornbeam. Trees, or shrubs, monoecious, flowers in aments which often are cone-like; fruit a nut.
7. Fagaceae- (Beech family). Examples: Beech, Oak. Trees, monoecious staminate flowers in catkins (aments), carpellate flowers solitary in leaf axils; fruit a nut with a bur, or cup; leaves simple, with deciduous stipules.
8. Polynonaceae- (Buckwheat family). Examples: Curled Dock, Sorrel, Smartweed, Doorweed. Thin sheathing stipule (ocrea) completely surrounding the stem at each node; leaves simple, with deciduous stipules.
9. Caryophyllaceae- (Pink family). Examples: Chickweeds, Bouncing Bet, Fire Pink. Leaves opposite and entire; joints swollen; sepals often united at the base and persistent.
10. Ranunculaceae- (Crowfoot family). Examples: Buttercup, Columbine, Larkspur. Herbs with numerous, distinct carpels or pistils, numerous stamens, calyx often colored like the corolla; leaves compound, or dissected.
11. Cruciferae- (Mustard family). Examples: Mustard, Toothwort, Yellow Rocket. Flowers with 4 petals, 4 sepals, 6 stamens two of which are short. Bracts often present at base of some of the stamens; fruits are pods (siliques, or silicles).
12. Rosaceae- (Rose family). Examples: Apple, Strawberry, cinquefoil. Herbs, shrubs, or trees; flowers perigynous, 5 parted, stamens 5 to many; leaves usually alternate, stipules usually present.



## GENERAL CHARACTERISTICS OF SOME COMMON PLANT FAMILIES, continued

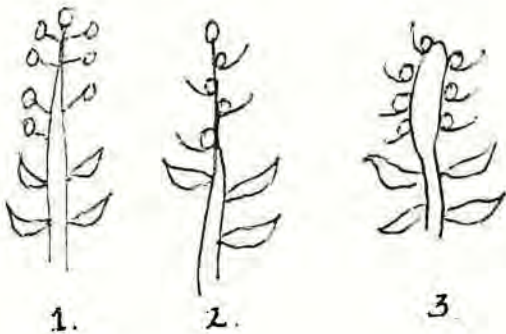
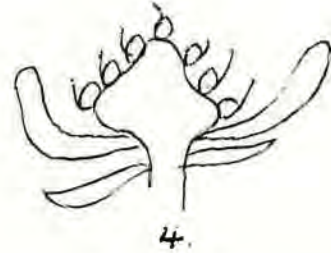
13. Leguminosae- (Legume family). Examples: Black Locust, Clover, Peas, Beans, Herbs, or trees, with alternate, usually pinnately compound leaves with pulvint and stipules; flowers irregular (zygomorphic); fruit a pod (legume).
14. Euphorbiaceae- (Spurge family).. Examples: Spurges, Poinsettia, Snow-on-the-Mountain. Sisorangiate, monoecious, or dioecious; Inflorescence often a cyatium, juice milky and acrid; ovulary usually 3 celled and 3 lobed.
15. Umbelliferae- (Carrot family)- Examples: Carrot, Parsnip, Pepper and Salt. Herbs with alternate, compound leaves with conspicuous sheathing bases; stems hollow; aromatic, carrot-like odor; flowers usually in umbels; ovulary interior.
16. Ericaceae- (Heath family) Examples: Rhododendron, Azales, Winter-green. Trailing Arbutus. Trees, shrubs or sometimes herbs, often evergreen; flowers regular; stamens twice as many as the 4 or 5 corolla parts; ovulary superior or inferior.
17. Boraginaceae- (Borage family) Examples: Gromwell, Hound's Tongue, Virginia Cow-slip (Blue-bells). Usually rough, hairy herbs, with alternate entire leaves; ovulary usually deeply four lobed with style in center and connected with capels at the base.
18. Labiatae- (Mint family) Examples: Peppermint, Ground Ivy, Catnip, Herbs, with square stems; opposite, aromatic leaves; flowers zygomorphic with corolla tubular, ovulary four-lobed.
19. Solanaceae- (Nightshade family)- Examples: Nightshade, Irish Potato, Tomato, Peturris. Usually herbs; flowers 5 parted, petals united calyx persistent; fruit a many seeded berry.
20. Scrophulariaceae- (Figwort family) Examples: Mullein, Snap-dragon, Beardtongue. Herbs, or rarely trees; flowers more or less zygomorphic, stamens inserted on the tube of the two-lipped corolla; fruit a capsule with 8 cavities and numerour seeds.
21. Rubiaceae- (Madder family)- Examples; Bedstraw, Bluets, Buttonbush, Herbs, or shrubs; opposite entire leaves connected by interposed stipules; ovulary inferior.
22. Caprifoliaceae- (Honeysuckle family) Examples: Honeysuckle, Elderberry, Viburnum. Usually shrubs, with opposite leaves, often with stipules, corolla tubular, or rotate, some are zygomorphic, stamens as many as corolla lobes; ovulary inferior; fruit a berry, drupe or pod.
23. Compositae- (Composite family) Examples: Sunflower, Aster, Goldenrod, Dandelion. Herbs with flowers in close heads, at least outer (Rays) flowers with strap-shaped corolla (Ligulate); ovulary inferior.



Notes on the characteristics of the COMPOSITION

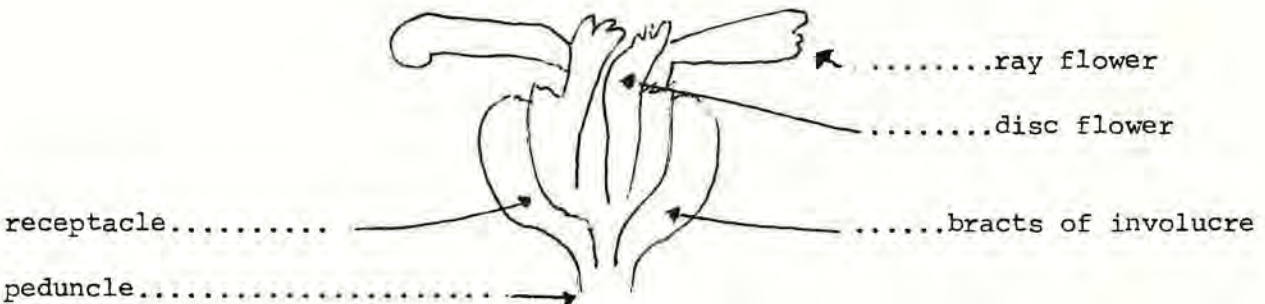
This is one of the largest families of flowering plants. Johnson estimates that it consists of about 13,000 species distributed in about 850 genera. Most of the composites are easily recognized as such, but in some genera the species are difficult to distinguish. The family contains many important weeds.

1. Raceme
2. Spike
3. Congested spike
4. Head
  - ..... involucre of bracts
  - ..... peduncle, (flower stalk)



In composites the inflorescence always a head (capitulum) substance of an involucre of bracts. Structural head is an inflorescence which has been compacted by the failure of to elongate (i.e. by a shortening of stem axis). The above diagrams show that the head may be derived from a raceme with a spike as an intermediate condition. The shortening axis which

bears the flowers is called the peduncle or disc. The bract-like leaves which subtend the individual flowers of a raceme or spike become the bracts of involucre



The heads frequently consist of two types of flowers. Those with tubular corollas are know as disc flowers. They always occupy a central position and sometimes a head bears only that type. The second type of flower has a corolla which is tubular at the base but which is open along one side and flattened throughout most of its length. This is the ray flower (ligulate flower;



Notes on the characteristics of the COMPOSITION, continued

strap-shaped). The corolla of ray flowers is much larger than the corolla of disc flowers in the same species. Sometimes a head consists completely of ray flowers.

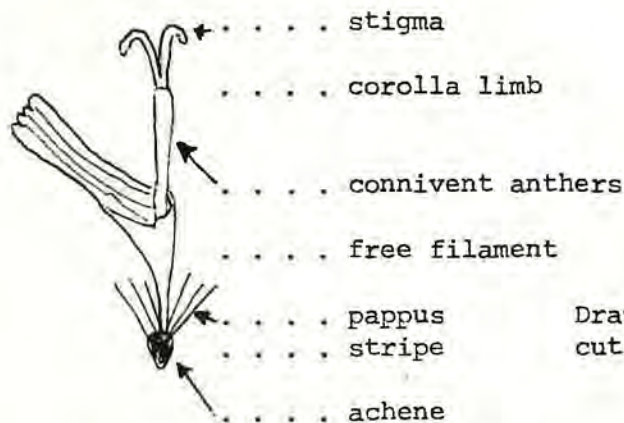
If ray flowers are present with disc flowers they always occupy a marginal position and the "rays" stimulate petals. Any head with rays is called radiate; those with no ray flowers are called discoid.

In all composites the flowers are arranged spirally in the heads (there are as many nodes involved as there are flowers), the younger flowers toward the center of the head. Theoretically at least, each flower is subtended by a floral bract which is usually chaffy. Sometimes the chaff is absent and the receptacle is said to be naked.

The flowers are all epigynous with the ovary surrounded by tissue of the receptacle which produces the corolla above the ovary. The ovary, containing only one seed, and surrounded by the receptacular material ripens to form a dry fruit called an achene (cypsola). Occasionally the receptacle continues on above the achene to form a stripe between the achene and the corolla.

The calyx, which rises from the top of the achene is called pappus in this family. It never consists of true sepals, but of scales, teeth, awns, bars, hair, a crown, or may be absent.

The corolla is made up of 5 petals which are usually seen as lobes or teeth at the top of the tube of the strap.



Drawn with front of corolla tube cut away to show the connivent anthers.

The androecium consists of 5 stamens whose anthers are connivent. The filaments are separate.

The style rises through the center of the flower and terminates in a two-part stigma which is usually exserted.

Disc flowers are usually perfect. Ray flowers, however, are frequently only pistillate, and sometimes neutral (with neither stils nor stamens).



## THE KEY

- |      |   |  |
|------|---|--|
| A.   | Trees with pollen and seeds borne in cones, without true flowers (GYMNOSPERMS) - in our flora 1 family -----  | Pinaceae                                     |
|      | Trees or herbs with true flowers some of which may be lacking certain parts (ANGIOSPERMS) -----   | *1   |
|      | *1. Monocots, distinguished by flower-parts in 3s or multiples of 3s, by parallel veins in the leaves, and by the irregular scattering of the veins in cross-sections of the stem -----         | 2  |
|      | Dicots, distinguished by flower-parts usually in 4s or 5s or multiples thereof, by the netted venation of the leaves, and by veins arranged in a circle around a central pith in the stem ----- | **6  |
| 2.   | Calyx and corolla easily visible, usually showy -----   | 3  |
|      | Calyx and corolla none or extremely small or inconspicuous -  | Araceae (see also<br>Cyperaceae & Gramineae) |
|      | 3. Calyx and corolla attached below the ovary -----   | Liliaceae                                    |
|      | Calyx and corolla attached above the ovary -----  | 4  |
| 4.   | Flowers irregular; stamens 1 or 2 -----   | Orchidaceae                                  |
|      | Flowers regular; stamens 3 or 6 -----   | 5  |
|      | 5. Stamens 6, easily visible -----  | Amaryllidaceae                               |
|      | Stamens 3, sometimes hidden -----   | Iridaceae                                    |
| **6. | Corolla lacking -----   | 7  |
|      | Corolla present in some of the flowers on a plant -----   | 25   |
|      | 7. Calyx lacking -----  | Salicaceae                                   |
|      | Calyx present, sometimes not easily seen -----  | 8  |
| 8.   | Flowers either staminate or pistillate, very rarely bisexual --   | 9  |
|      | Flowers usually with both stamens and pistils -----   | 19   |
|      | 9. Woody plants -----   | 10   |
|      | Herbaceous plants -----   | 18   |
| 10.  | Leaves or leaf-scars opposite -----   | 11   |
|      | Leaves or leaf-scars alternate -----  | 12   |
|      | 11. Stamens more than 4; ovary with 2 cavities;<br>fruit with 2 wings -----   | Aceraceae                                    |
|      | Stamens 2 or 3; ovary with 1 cavity; fruit<br>unwinged or with 1 wing -----   | Oleaceae                                     |
| 12.  | Twigs strongly aromatic; leaves pinnately compound -----  | Juglandaceae                                 |
|      | Twigs not noticeably aromatic; leaves simple -----  | 13   |
|      | 13. Twigs with milky juice; some flowers in a short spike --  | Moraceae                                     |
|      | Twigs without milky juice -----   | 14   |
| 14.  | Calyx free from the ovary; at least the staminate flowers<br>in catkins -----   | 15   |
|      | Calyx attached or fused to the ovary; inflorescences<br>not catkins -----   | 16   |
| 15.  | Both pistillate and staminate flowers in catkins -----  | Corylaceae                                   |
|      | Only staminate flowers in catkins; pistillate flowers 1 or 2<br>in an involucre which becomes an acorn cup or beech bur ----  | Fagaceae                                     |



16.	Trees; flowers in a compact cluster -----	Nyssaceae
	Shrubs; flowers in a pendant spike or raceme -----	17
17.	Plants less than 3 ft. in height; wood of twigs yellow --	Ranunculaceae
	-Plants often over 3 ft.; wood of twigs not yellow -----	Santalaceae
18.	Leaves compound, without stipules -----	Ranunculaceae
	-Leaves simple, with sheathing stipules -----	Polygonaceae
19.	Calyx free from the ovary or ovaries -----	21
	-Calyx fused to the ovary, at least in part -----	20
20.	Flowers with showy white stamens -----	Hamamelidaceae
	-Flowers green -----	Santalaceae
21.	More than 1 pistil per flower -----	Ranunculaceae
	-Only 1 pistil per flower -----	22
22.	Woody plants, not vining -----	23
	-Herbaceous plants or woody vines -----	24
23.	Leaves or leaf-scars alternate -----	Ulmaceae
	-Leaves or leaf-scars opposite -----	Aceraceae
24.	Leaves with sheathing stipules -----	Polygonaceae
	-Leaves without sheathing stipules -----	Aristolochiaceae
25.	Petals free from each other -----	26
	-Some or all petals united, at least basally -----	74
26.	Stamens more than twice the number of petals, usually more than 12 -----	27
	-Stamens usually less than twice the number of petals, or less than 12 -----	35
27.	Calyx and corolla attached to or on top of ovary -----	Rosaceae
	-Calyx and corolla attached below the ovary -----	28
28.	Pistils 2 or more, separate (slightly coherent in Magnoliaceae) -----	29
	-Pistil 1 per flower, simple (of 1 carpel) or compound (of 2 or more fused carpels) -----	32
29.	Leaves or leaf-scars opposite; stamens attached to the rim of a cup containing the pistils -----	Calycanthaceae
	-Leaves or leaf-scars alternate; stamens attached to a flat or cone-shaped receptacle -----	30
30.	Herbs (See Xanthorrhiza, a small shrub with yellow wood) ---	Ranunculaceae
	-Woody plants; wood not yellow -----	31
31.	Flowers over 2 in. in diameter; pistils somewhat fused	Magnoliaceae
	-Flowers about 1 in. in diameter; pistils entirely separate	Annonaceae
32.	Pistil simple, apparently of 1 carpel -----	33
	-Basal portion (ovary) of pistil of 2 or more fused carpels ----	34
33.	Plants herbaceous, but without large peltate leaves ----	33a
	-Plants woody or with large peltate leaves	34a
33a.	Pistils 1 per flower -----	Leguminosae
	-Pistils several per flower -----	Ranunculaceae
34.	Plant sap clear; seeds attached to center of fruit -----	Portulacaceae
	-Plant sap not clear; seeds attached to side of fruit -----	Papaveraceae
34a.	Plants with 1 or 2 peltate leaves -----	Berberidaceae
	-Plants with more than 2 non-peltate leaves -----	Rosaceae



35.	Calyx and corolla attached below the ovary -----	36
	-Calyx and corolla fused to the ovary -----	66
36.	Pistils 2 or more, not united into a compound pistil even if slightly coherent at the base -----	37
	-Pistil 1, either simple or compound -----	40
	37. Plants succulent, with whorled fleshy leaves -----	Crassulaceae
	-Plants not succulent; leaves not whorled -----	38
38.	Leaves with stipules -----	Rosaceae
	-Leaves without stipules -----	39
	39. Stamens free from the calyx -----	Ranunculaceae
	-Stamens inserted on the calyx -----	Saxifragaceae
40.	Stamens and petals of the same number and opposite each other -----	41
	-Stamens and petals, <u>if of the same number</u> , alternate with each other -----	42
	41. -Flowers very small, less than 1/3 in. in diameter; petals green -----	Anacardiaceae
	Flowers less than 1 in. in diameter; petals pink-striped -----	Portulacaceae
	-Flowers more than 1 in. in diameter; petals white ---	Berberidaceae
42.	Each pistil simple, or 1 carpel -----	43
	-Pistil compound, at least as to ovary -----	44
	43. One pistil per flower -----	Leguminosae
	-Two or more pistils (rarely 1) per flower -----	Ranunculaceae
44.	Ovary with only 1 cavity -----	45
	-Ovary with 2 or more cavities -----	50
	45. Corolla bilateral, without radial symmetry -----	46
	-Corolla regular, with radial symmetry -----	47
46.	Petals 5 -----	Violaceae
	-Petals 4, or more than 5 -----	Papaveraceae
	47. Woody plants -----	Oleaceae
	-Herbaceous plants -----	48
48.	Sepals and petals 4; stamens usually 6 -----	Cruciferae
	-Sepals and petals rarely 4; stamens never 6 -----	49
	49. Leaves opposite; nodes of stem usually swollen -----	Caryophyllaceae
	-Leaves alternate, or if opposite, stem-nodes not swollen -----	Saxifragaceae
50.	Flowers regular, with regular symmetry -----	51
	-Flowers irregular, with bilateral symmetry -----	64
	51. Ratio of stamens to petals 1:1 or 2:1 -----	52
	-Ratio of stamens to petals other than above -----	55
52.	Each cavity of the ovary with 1 or 2 ovules -----	53
	-Each cavity of the ovary usually with more than 2 ovules ----	58
	53. Herbaceous plants -----	Cruciferae
	-Woody plants -----	54
54.	More stamens than petals -----	Aceraceae
	-Petals 4, stamens fewer -----	Oleaceae



55.	Plants woody -----	56
	-Plants herbaceous -----	Geraniaceae
		and Cruciferae
56.	Leaves alternate -----	Aquifoliaceae
	-Leaves opposite -----	57
57.	Twigs conspicuously green; leaves with pinnate venation; shrubs or vines -----	Celastraceae
	-Twigs not conspicuously green; leaves with palmate venation; trees -----	Aceraceae
58.	Leaves compound -----	59
	-Leaves simple but sometimes deeply lobed -----	62
59.	Plants woody -----	Staphyleaceae
	-Plants herbaceous -----	60
60.	Leaves simple, blades rounded -----	Diapensiaceae
	-Leaves compound -----	61
61.	Leaves with 3 leaflets; taste of plants acid -----	Oxalidaceae
	-Leaves pinnately compound; taste acrid or mild -----	Cruciferae
62.	Leaves opposite -----	Caryophyllaceae
	-Leaves alternate -----	63
63.	Plants woody -----	Ericaceae
	-Plants herbaceous, succulent -----	Crassulaceae
64.	Plants herbaceous -----	Polygalaceae
	-Plants woody -----	65
65.	Leaves simple -----	Ericaceae
	-Leaves palmately compound -----	Hippocastanaceae
66.	Ovary with 1 cavity -----	67
	-Ovary with 2 or more cavities -----	68
67.	Plants herbaceous -----	Saxifragaceae
	-Plants woody -----	Cornaceae
68.	Flowers borne in umbels or umbel-like clusters -----	69
	-Flowers not borne as above -----	71
69.	Plants woody -----	Cornaceae
	-Plants herbaceous -----	70
70.	Ovary with 2 cavities and 2 styles -----	Umbelliferae
	-Ovary with more than 2 cavities and 2 styles -----	Araliaceae
71.	Pistil with 1 style -----	72
	-Pistil with 2 or more styles -----	73
72.	Twigs conspicuously green; ovary with 2-5 cavities -----	Celastraceae
	-Twigs not conspicuously green; ovary with 2 cavities -----	Cornaceae
73.	Leaves with stipules -----	Rosaceae
	-Leaves without stipules -----	Saxifragaceae
74.	Stamens more than the corolla-lobes -----	75
	-Stamens of the same number of corolla-lobes, or fewer -----	82
75.	Pistil of 1 carpel; fruit a legume (pod) -----	Leguminosae
	-Pistil of more than 1 carpel -----	76
76.	Ovary with a cavity -----	77
	-Ovary with more than 1 cavity -----	78



77.	Plants woody; flowers symmetrical -----	Styracaceae
	-Plants herbaceous; flowers bilaterally symmetrical --	Papaveraceae
	(incl. Fumariaceae)	
78.	Corolla highly zygomorphic, winged -----	Polygalaceae
	-Corolla regular or slightly zygomorphic, not winged -----	79
79.	-Plants herbaceous -----	80
	Plants woody -----	81
80.	Plants with green leaves -----	Oxalidaceae
	-Plants not green, saprophytes -----	Pyrolaceae
81.	Trees with bell-shaped white corollas -----	Styracaceae
	-Shrubs -----	Ericaceae
82.	Calyx and corolla attached below ovary -----	83
	-Calyx and corolla fused to the side or the top of the ovary ---	91
83.	Flowers regular -----	84
	-Flowers irregular -----	87
84.	Plants woody -----	Ericaceae
	-Plants herbaceous -----	85
85.	Ovary very deeply 4-parted, maturing into 4 nutlets --	Boraginaceae
	-Ovary not deeply 4-parted, maturing in a rounded capsule -----	86
86.	Corolla open, bell-shaped -----	Hydrophyllaceae
	-Corolla with a long basal tube -----	Polemoniaceae
87.	Plants not green, parasites -----	Orobanchaceae
	-Plants with green leaves -----	88
88.	Plants woody -----	89
	-Plants herbaceous -----	90
89.	Tree with large, blue flowers appearing before the leaves -----	Scrophulariaceae
	-Vines or trees; flowers not blue -----	Bignoniaceae
90.	Each cavity of the ovary with 1 ovule -----	Labiatae
	-Each cavity of the ovary usually with more than 2 ovules ---	Scrophulariaceae
91.	Flowers in a very compact involucrate head; anthers usually united into a tube around the style -----	Compositae
	-Flowers not in a head; anthers free -----	92
92.	Plants mostly herbaceous; leaves whorled, or opposite with stipules -----	Rubiaceae
	-Plants mostly woody; leaves never whorled, if opposite, without stipules -----	Caprifoliaceae



Keys to Genera and Species (Families listed alphabetically)

ACERACEAE

One genus: Acer

- |    |   |                         |
|----|---|-------------------------|
| 1. | Leaves compound -----   | <u>A. negundo</u>       |
|    | -Leaves simple but lobed -----  | 2                       |
| 2. | Leaves appearing after the flowers -----  | 3                       |
|    | -Leaves appearing before or with the flowers -----                                    | 4                       |
| 3. | Corolla present; fruit usually reddish -----  | <u>A. rubrum</u>        |
|    | -Corolla absent; fruit yellowish-green -----  | <u>A. saccharinum</u>   |
| 4. | Buds stalked, with 2 valvate scales; flowers<br>in a terminal raceme -----            | 5                       |
|    | -Buds not stalked, with 4-8 scales; flowers appearing<br>laterally on the twigs ----- | <u>A. saccharum</u>     |
| 5. | Bark with white stripes; twigs and buds not hairy -----                               | <u>A. pensylvanicum</u> |
|    | -Bark not striped with white; twigs and buds with short hairs -                       | <u>A. spicatum</u>      |

AMARYLLIDACEAE

One genus and species: Hypoxis hirsuta

ANACARDIACEAE

One genus and species: Rhus radicans (poison ivy)

ANNONACEAE

One genus and species: Asimina triloba

AQUIFOLIACEAE

One genus and species: Ilex opaca

ARACEAE

One genus: Arisaema

- |    |                                  |                      |
|----|----------------------------------|----------------------|
| 1. | Leaves strictly 3-parted -----   | <u>A. triphyllum</u> |
|    | -Leaves more than 3-parted ----- | <u>A. quinatum</u>   |

ARALIACEAE

One genus and species: Panax trifolius

ARISTOLOCHIACEAE

Key to genera and species

- |    |                   |                            |
|----|-------------------|----------------------------|
| 1. | Woody vines ----- | <u>Aristolochia durior</u> |
|    | -Herbs -----      | <u>Asarum</u>              |



Asarum

- 1. Leaves evergreen, apex acute ----- A. arifolium
- Leaves not evergreen, apex rounded ----- 2
- 2. -Sepals acute, without long, slender points ----- A. canadense
- Sepals with long tail-like points ----- A. canadense  
var. acuminatum

BERBERIDACEAE

Key to genera and species

- 1. Leaves deeply compound ----- Caulophyllum
- Leaves simple but lobed, peltate ----- thalictroides
- 2. Inflorescence a single flower in the crotch ----- 2
- between the 2 leaves ----- Podophyllum peltatum
- Inflorescence a cyme of several flowers appearing ----- Diphylleia cymosa
- about the leaves -----

BIGNONIACEAE

One genus and species: Bignonia capreolata

BORAGINACEAE

Key to genera and species

- 1. Leaves glabrous; corolla with a tube ----- Mertensia virginica
- Leaves hairy; corolla relatively flat ----- Cynoglossum  
virginianum

CALYCANTHACEAE

One genus and species: Calycanthus fertilis

CAPRIFOLIACEAE

Key to genera and species

- 1. Leaves compound; twigs large, filled with much pith ----- Sambucus pubens
- Leaves simple; twigs slender ----- 2
- 2. Corolla funnel-form, yellowish ----- Lonicera  
canadensis
- Corolla flattened, white ----- Viburnum



Viburnum

- 1. Leaves valentine-shaped, rough-veiny beneath, with stellate hairs ----- V. alnifolium
- Leaves elliptical, without very conspicuous veins beneath; hairs not stellate ----- 2
- 2. Leaves without scurfy red hairs ----- V. prunifolium
- Leaves with scurfy red hairs ----- V. rufidulum

CARYOPHYLLACEAE  
Key to genera and species

- 1. Plants often over 1 ft. tall; flowers large, red ----- Silene virginica
- Plants usually less than 6 in. tall; flowers small, white --- 2
- 2. Styles usually 3; fruit opening by splitting into 3 parts Stellaria
- Styles usually 4 or more; fruit opening by top splitting into 10 short teeth ----- Cerastium nutans  
and C. viscosum

Stellaria

- 1. Leaves ovate; flowers 6 mm or less in diameter ----- S. media
- Leaves elliptic-oblong; flowers over 6 mm in diameter ---- 2
- 2. Petals shorter than the sepals ----- S. pubera
- Petals as long as or exceeding the sepals ----- S. pubera var. silvatica

CELASTRACEAE  
One genus and species: Euonymus americanus

COMPOSITAE  
Key to genera and species

- 1. Heads without any ligulate (strap-shaped) corollas; plants unisexual ----- Antennaria plantaginifolia & A. solitaria
- Heads with some or all corollas ligulate; many flowers bisexual ----- 2
- 2. Marginal (ray) flowers different from the central (disk) flowers in shape or color ----- 4
- All flowers similar ----- 3
- 3. Chaffy minute scales and bristles around the top of the ovary ----- Krigia virginica
- Only capillary bristles around the top of the ovary or fruit - Taraxacum officinale
- 4. Ray flowers yellow ----- Senecio
- Ray flowers not yellow ----- 5



- 5. Leaves compound, extremely finely dissected ----- Achillaea  
millefolium
- Leaves, if divided, not extremely finely dissected ----- 6
- 6. Heads 1-1/2in. or more in diameter ----- Chrysanthemum  
leucanthemum var. pinnatifidum
- Heads seldom over 1 in. in diameter ----- Erigeron pulchellus  
and E. philadelphicus

Senecio

- 1. Blade of basal leaves cordate ----- S. aureus
- Blade of basal leaves not cordate ----- 2
- 2. Blade of basal leaves obovate ----- S. obovatus
- Blade of basal leaves oblong to elliptic-lanceolate ---- S. smallii

CORNACEAE

One genus: Cornus

- 1. Leaves opposite; inflorescences with large, white or  
pink bracts ----- C. florida
- Some leaves appearing alternate; inflorescences  
without large bracts ----- C. alternifolia

CORYLACEAE

Key to genera and species

- 1. Shrubs; female inflorescence hidden by large, ovate bracts - Corylus americana
- Trees; female inflorescence cone- or catkin-like ----- 2
- 2. Trunks and larger branches with protruding ridges  
resembling muscles; bark smooth ----- Carpinus caroliniana
- Stems without such ridges; bark rough or  
smooth and papery ----- 3
- 3. Lateral veins of leaves unforked and continuous to the  
margin; bark smooth, papery, with conspicuous lenticels  
in young trees; fruits winged, in cones ----- Betula
- Some lateral veins forked; bark ridged; lenticels  
small; fruit a nutlet enclosed in a papery sac ----- Ostrya virginiana

Betula

- 1. Bark red-brown; twigs without odor of wintergreen ----- B. nigra
- Bark not red-brown; twigs, when broken, with odor  
of wintergreen ----- 2
- 2. Bark on young trees yellowish, peeling easily ----- B. alleghaniensis
- Bark on young trees dark, like that of cherry, tight -- B. lenta

CRASSULACEAE

One genus and species: Sedum ternatum



CRUCIFERAE  
Key to genera and species

- |    |  |                                |
|----|--|--------------------------------|
| 1. | Corollas yellow -----                                  | <u>Barbarea</u>                |
|    | -Corollas white or pale purple -----                   | 2                              |
| 2. | Fruits short, less than 3:1 -----                      | 3                              |
|    | -Fruits longer than 3:1 -----                          | 4                              |
| 3. | Plants with stems; fruits triangular -----             | <u>Capsella bursa-pastoris</u> |
|    | -Plants stemless; fruits broadly elliptical -----      | <u>Draba verna</u>             |
| 4. | Fruits flattened -----                                 | <u>Arabis</u>                  |
|    | -Fruits more or less rounded in cross-section -----    | 5                              |
| 5. | Leaves with 3 leaflets or divided into 3 slender lobes | <u>Dentaria</u>                |
|    | -Leaves pinnately compound or pinnatifid -----         | 6                              |
| 6. | Succulent, aquatic plants; fruits short, curved -----  | <u>Nasturtium officinale</u>   |
|    | -Plants not aquatic; fruits slender, straight -----    | <u>Cardamine</u>               |

Arabis

- |    |   |                     |
|----|---|---------------------|
| 1. | Plants not branched basally; fruits long, not twisted ----- | <u>A. laevigata</u> |
|    | -Plants much branched basally; fruits twisted -----         | <u>A. lyrata</u>    |

Barbarea

- |    |   |                    |
|----|---|--------------------|
| 1. | Four or less pairs of leaflets in lower leaves;<br>fruit-stalk slender -----                | <u>B. vulgaris</u> |
|    | -Four or more pairs of leaflets in lower leaves;<br>fruit-stalk as thick as the fruit ----- | <u>B. verna</u>    |

Cardamine

- |    |   |                      |
|----|---|----------------------|
| 1. | Plants without basal rosette of leaves; petals 6-8 mm long  | <u>C. clematitis</u> |
|    | -Plants with basal rosette; petals not over 4 mm long ----- | <u>C. parviflora</u> |
|    | var. <u>arenicola</u> and                                   | <u>C. hirsuta</u>    |

Dentaria

- |    |   |                        |
|----|---|------------------------|
| 1. | Rhizome rough, tough, not easily breaking into<br>well-defined segments ----- | <u>D. diphylla</u>     |
|    | -Rhizome easily breaking up into well-defined,<br>small smooth tubers -----   | 2                      |
| 2. | Basal leaf usually lacking; stalk to flowers with hairs                       | <u>D. laciniata</u>    |
|    | -Basal leaf present; stalk to flowers glabrous -----                          | <u>D. heterophylla</u> |



CYPERACEAE  
Key to genera and species

- |    |  |                            |
|----|--|----------------------------|
| 1. | Leaves about 1-1/2 in. wide, evergreen, resembling green leather; inflorescences white -----   | <u>Cymophyllus fraseri</u> |
|    | -Leaves less than 1 in. wide, not leathery; inflorescences not white . . . <u>Carex</u> - a difficult genus - the most conspicuous spring-flowering species is <u>C. plantaginea</u> . |                            |

DIAPENSIACEAE  
One genus and species: Galax aphylla

ERICACEAE  
Key to genera and species

- |    |   |   |
|----|---|---|
| 1. | Low, trailing, evergreen shrub; small pink flowers appearing early among the leaves ----- | <u>Epigaea repens</u>                                   |
|    | -Upright shrubs -----   | 2   |
|    | 2. Petals completely separate; leaves small, glossy, evergreen -----                      | <u>Leiophyllum buxifolium</u>                           |
|    | -Petals partially or wholly fused -----   | 3   |
| 3. | Ovary free, superior -----  | 4   |
|    | -Ovary inferior with calyx fused to it -----  | 7   |
|    | 4. Corollas flattened-campanulate with pouches in which anther-tips are inserted -----    | <u>Kalmia latifolia</u>                                 |
|    | -Corollas funnel-form or urn-shaped; stamen tips free -                                   | 5   |
| 5. | Corollas funnel-form, over 1 cm in diameter at the rim ----                               | <u>Rhododendron</u>                                     |
|    | -Corollas widest (but less than 1 cm) at center or below ----                             | 6   |
|    | 6. Anther-awns reflexed -----   | <u>Pieris floribunda</u>                                |
|    | -Anther-awns not reflexed -----   | <u>Leucothoe fontanesiana</u><br>( <u>L. editorum</u> ) |
| 7. | Leaves punctate with resinous dots -----  | <u>Gaylussacia</u>                                      |
|    | -Leaves without resinous dots -----   | <u>Vaccinium</u>  |

Gaylussacia

- |    |   |                   |
|----|---|-------------------|
| 1. | Leaf-blades thickened; stamen-stalks glabrous ----- | <u>G. baccata</u> |
|    | -Leaf-blades thin; stamen-stalks hairy -----        | <u>G. ursina</u>  |

Rhododendron

- |    |   |                         |
|----|---|-------------------------|
| 1. | Flowers appearing before or with the leaves; corollas pink or white ----- | <u>R. nudiflorum</u>    |
|    | -Flowers appearing after the leaves; corollas orange or yellow -----      | <u>R. calendulaceum</u> |

Vaccinium

- 1. Plants with all younger portions very hairy ----- V. hirsutum
- Plants not extremely hairy ----- 2
- 2. Flowers broadly campanulate ----- V. stamineum
- Flowers cylindrical or urn-shaped ----- 3
- 3. Shrubs 3-8 ft. tall ----- V. simulatum
- Shrubs not usually over 2 ft. tall ----- 4
- 4. Leaves rather thick; some without serrations ----- V. vacillans
- Leaves thin, serrate throughout ----- V. pallidum

FAGACEAE

Key to genera and species

- 1. Leaves serrate but not coarsely dentate or lobed ----- Fagus grandifolia
- Leaves coarsely dentate or lobed ----- Quercus

Quercus

- 1. Leaves distinctly lobed ----- Q. alba
- Leaves coarsely dentate but not lobed ----- Q. prinus

GERANIACEAE

One genus: Geranium

- 1. Petals over 1 cm long ----- G. maculatum
- Petals less than 1 cm long ----- G. carolinianum

GRAMINEAE

One genus: Poa

- 1. Plants annual, small ----- 2
- Plants perennials, tall ----- 3
- 2. Lemmas with 3 veins, cobwebby at base; anthers  
not exerted at flowering ----- P. chapmaniana
- Lemmas with 5 veins, not cobwebby at base; anthers  
exserted at flowering ----- P. annua
- 3. Creeping rhizomes (stems) present ----- P. cuspidata
- Creeping rhizomes absent; plants tufted ----- P. alsodes

HAMAMELIDACEAE

One genus and species: Fothergilla gardeni

HIPPOCASTANACEAE

One genus and species: Aesculus octandra



HYDROPHYLLACEAE

One genus: Phacelia

- 1. Leaves not compound but often deeply lobed-----2.
- Leaves deeply compound-----P. bipinnatifida
- 2. Corollas white or pale lilac-----P. fimbriata
- Corollas blue-----3.
- 3. Petals fringed-----P. purshii
- Petals not fringed-----P. dubia

IRIDACEAE

Key to genera

- 1. Flowers large, over 2 in. in diameter; leaves over  $\frac{1}{2}$  in. wide. Iris
- Flowers less than 1 in. in diameter; leaves usually less than  $\frac{1}{4}$  in. wide----- Sisyrinchium

Iris

- 1. Petals with cream-colored, longitudinal ridges up the center----- I. cristata
- Petals with a golden longitudinal stripe up the center----- I. verna

Sisyrinchium

- 1. Petals blue----- S. angustifolium
- Petals white----- S. albidum

JUGLANDACEAE

Key to genera

- 1. Pith of twigs chambered----- Juglans
- Pith of twigs not chambered----- Carya

Juglans

Key to species

- 1. Pith chocolate-brown----- J. cinerea
- Pith tan----- J. nigra

Carya

- 1. Bark loose, splitting off in strips; leaflets usually 5, terminal one stalked----- C. ovata
- Bark tight; leaflets usually 7-9, terminal one sessile----- C. tomentosa

JUNCACEAE

One genus: Luzula

- 1. Plants with small bulbs at base; flowers in rather compact cluster- L. bulbosa
- Plants without bulbs; flowers solitary on end of slender inflorescence branches----- L. acuminata

LABIATAE

Key to genera and species

- 1. Plants trailing ----- Glechoma hederacea
- Plants erect ----- 2.
- 2. Plants tall, 1 ft. or more, with a basal rosette  
of large leaves at base ----- Salvia lyrata
- Plants small, less than 6 in., without large  
leaves at base ----- Lamium amplexicaule +  
L. purpureum

LAURACEAE

Key to genera

- 1. Twigs green; trees ----- Sassafras albidum
- Twigs brown; shrubs ----- Lindera benzoin

LEGUMINOSAE

Key to genera and species

- 1. Herbs ----- Vicia caroliniana
- Trees ----- 2.
- 2. Leaves simple; flowers pink ----- Cercis canadensis
- Leaves compound; flowers white ----- 3.
- 3. Leaflets opposite; twigs with thorns ----- Robinia pseudoacacia +  
R. viscosa
- Leaflets alternate; twigs without thorns ----- Cladrastis lutea

LILIACEAE

Key to genera

- 1. Flowers unisexual; separate male and female plants ----- Chamaelirium luteum
- Flowers perfect (bisexual) ----- 2.
- 2. Leaves basal; flowering stem  
essentially free of leaves ----- 3.
- Leaves present over much of the stem,  
sometimes a single whorl ----- 4.
- 3. Flowers one per plant; leaves usually 2 ----- Erythronium americanum
- Flowers several; leaves several ----- Clintonia borealis
- 4. Leaves whorled (below the flowers) ----- 5.
- Leaves arranged along the stem ----- 6.
- 5. Flowers one per plant, large, showy ----- Trillium
- Flowers several, inconspicuous ----- Medeola virginiana
- 6. Flowers small, white, numerous in a terminal raceme ----- Smilacina racemosa
- Flowers solitary, or at most 2 or 3 on a peduncle ----- 7.
- 7. Flowers green, cylindrical with perianth segments fused ----- Polygonatum biflorum +  
P. canaliculatum
- Flowers not green, perianth segments separate ----- 8.
- 8. Flowers pale rose pink ----- Streptopus roseus
- Flowers white, greenish or yellow ----- 9.



MORACEAE

One genus and species: Morus rubra

NYSSACEAE

One genus and species: Nyssa sylvatica

OLEACEAE

1. Trees; leaves compound; flowers green ----- Fraxinus americana  
-Shrubs or small trees; leaves simple; flowers white ----- Chionanthus virginicus

ORCHIDACEAE

Key to genera

1. Plants purplish, not green ----- Corallorhiza wisteriana  
-Plants green ----- 2.  
2. Plants glabrous; anthers with pollen 1 ----- Orchis spectabilis  
-Plants hairy; anthers with pollen 2 ----- Cypripedium

Cypripedium

1. Leaves all basal; usually two flowers pink-purple ----- C. acaule  
-Stem leafy; flowers yellow ----- 2.  
2. Stem usually with 4 or more leaves, sepals usually  
purplish ----- C. calceolus var. parviflorum  
-Stem usually with 4 or less leaves; sepals yellowish green - C. calceolus var. pubescens

OROBANCHACEAE

Key to genera

1. Flowers and fruits clustered into a cob-like cluster; stem thick -- Conopholis americana  
-Flowers solitary on slender stems ----- Orobanche uniflora

OXALIDACEAE

One genus: Oxalis

1. Petals purplish-violet; plants with a bulb-like stem ----- O. violacea  
-Petals yellow; stem slender, more or less erect ----- O. stricta

PAPAVERACEAE (including Fumariaceae)

Key to genera

1. Leaves simple, lobed; sap orange-red. ----- Sanguinaria canadensis  
-Leaves compound; sap not orange-red ----- 2.  
2. Corolla with 2 spurred petals; leaves basal ----- Dicentra  
-Corolla with 1 spurred petal; stems leafy ----- Corydalis sempervirens



Dicentra

- 1. Flowers usually white, in a simple raceme; base of plant with clusters of thickened grain or bulb-like structures ----- 2.
- Flowers pink in a compound cluster; base of plant a thickened crown ----- D. eximia
- 2. Spurred petal acute; grain-like structures on the rhizome ----- D. canadensis
- Petal almost rounded; corolla cordate; rhizome with much-thickened scales ----- D. cucullaria

PINACEAE

Key to genera

- 1. Leaves long clustered in bundles of 2-5 ----- Pinus
- Leaves short, appearing singly along the twigs ----- Tsuga canadensis

Pinus

- 1. Leaves in bundles of 5 ----- P. strobus
- Leaves in bundles of 3 or less ----- 2.
- 2. Cones conspicuously lop-sided, with heavy spines ----- P. pungens
- Cones nearly symmetrical, with rather weak spines ----- 3.
- 3. Leaves usually 3 in a bundle ----- P. rigida
- Leaves usually 2 (rarely 3) in a bundle ----- P. echinata

POLEMONIACEAE

One genus: Phlox

- 1. Leaves lanceolate, acute at apex; plants with few stolons; petals usually notched at apex ----- P. divaricata + P. amoena
- Plants with many stolons; many leaves obovate; petals usually rounded at apex ----- P. stolonifera

POLYGALACEAE

One genus and species: Polygala paucifolia

POLYGONACEAE

One genus and species: Rumex acetosella

PORTULACACEAE

One genus: Claytonia

- 1. Leaves almost linear ----- C. virginica
- Leaves broad ----- C. caroliniana

RANUNCULACEAE

- 1. Plants shrubby ----- Xanthorhiza simplicissima



- Plants herbaceous ----- 2.
- 2. Petals present ----- 3.
- Petals absent, sepals often petaloid ----- 7.
- 3. Some or all petals spurred ----- 4.
- All petals without spurs ----- 5.
- 4. Petals blue, gray or white ----- Delphinium tricorne
- Petals orange, red or yellow ----- Aquilegia canadensis
- 5. Flowers yellow ----- Ranunculus
- Flowers white, pink-purple or blue, often subtended by whorled  
leaves or bracts (in Hepatica resembling sepals) ----- 6.
- 6. Leaves simple with three broad lobes ----- Hepatica acutiloba
- Leaves compound or deeply cut ----- 7.
- 7. Plants hairy; flowers solitary; roots fibrous ----- Anemone quinquefolia
- Plants glabrous; flowers in a terminal cluster ----- 8.
- 8. Plants less than 6 in. tall; flowers in a terminal umbel  
    subtended by a whorl of bracts; roots tuberous ----- Anemonella  
    thalictroides
- Plants over 6 in. tall; flowers not in an umbel ----- Thalictrum dioicum

Ranunculus

- 1. Petals 7-15 mm long; roots tuberous ----- R. hispidus
- Petals 2.5-5 mm long; roots fibrous ----- 2.
- 2. Achenes strongly flattened, with a recurved style ----- R. recurvatus
- Achenes not much flattened, with a small straight or  
    slightly curved style ----- R. abortivus

ROSACEAE

- 1. Plants herbaceous ----- 2.
- Plants woody ----- 4.
- 2. Plants less than 6 in. tall, stoloniferous ----- 3.
- Plants over 1 ft. tall, not stoloniferous ----- Gillenia trifoliata
- 3. Petals yellow; receptacle dry in fruit; leaves with 5 leaflets --- Potentilla
- Petals white; receptacle fleshy and edible when mature;  
leaves with 3 leaflets ----- Fragaria virginica
- 4. Plants slender, arching, with small spines; leaves with  
    5 leaflets; flowers with many simple pistils ----- Rubus allegheniensis
- Plants erect; spines stout or none; leaves simple;  
    flowers with one pistil ----- 5.
- 5. Pistil simple, superior, in each floral cup ----- Prunus
- Pistil compound, inferior, fused to the floral cup ----- 6.
- 6. Twigs usually with spines; centers of fruits very hard ----- Crataegus
- Twigs spineless, centers of fruits papery or leathery ----- 7.
- 7. Flowers in a grape-like cluster ----- Amelanchier arborea
- Flowers in a more flattened cluster ----- Pyrus + A. laevis

Crataegus

- 1. Young portions of branches glandular ----- C. boyntoni
- Young portions of branches without glands ----- C. macrosperma

Prunus

- 1. Flowers pink ----- P. persica
- Flowers white ----- 2.
- 2. Flowers in a grape-like cluster ----- P. serotina
- Flowers in flattened clusters ----- P. pennsylvanica

Potentilla

- 1. Leaflets usually twice as long as wide; first flower appearing just above first long internode ----- P. canadensis
- Leaflets about  $1\frac{1}{2}$  times as long as wide; first flower appearing above second or third long internode ----- P. simplex

Pyrus

- 1. Petals white; styles free throughout ----- P. communis
- Petals some shade of pink; styles fused below ----- 2.
- 2. Leaves folded lengthwise in the bud; anthers red ----- P. coronaria
- Leaves rolled lengthwise in the bud; anthers yellow ----- P. malus

RUBIACEAE

Key to genera

- 1. Plants long, slender; leaves whorled ----- Galium aparine
- Plants short; leaves opposite ----- Houstonia

Houstonia

- 1. Plants with filiform, trailing stems ----- H. serpyllifolia
- Plants totally erect or with short, trailing stems ----- 2.
- 2. Most leaves basal; pedicels long, slender ----- H. caerulea
- Most leaves on stems; pedicels short ----- H. purpurea

SALICACEAE

Key to genera

- 1. Bud with one scale; leaves much longer than wide ----- Salix
- Bud with several scales; leaves broadly ovate ----- Populus alba

Salix

- 1. Trees; mature leaves glabrous; usually flowering after leaves appear ----- S. nigra
- Shrubs; mature leaves hairy; usually flowering before or during appearance of the leaves ----- 2.
- 2. Leaves silky beneath with white hairs ----- S. sericea
- Leaves hairy but not silky-white beneath ----- S. humilis

SANTALACEAE

One genus and species: Pyralaria pubera



SAXIFRAGACEAE  
Key to genera

- |   |                            |
|---|----------------------------|
| 1. Plants woody -----   | 2.                         |
| -Plants herbaceous -----  | 3.                         |
| 2. Leaves opposite -----  | <u>Philadelphus</u>        |
| -Leaves alternate -----   | <u>Ribes</u>               |
| 3. Corolla tiny, bell-shaped with fringed petals -----  | <u>Mitella diphylla</u>    |
| -Corolla larger, not bell-shaped or fringed -----   | 4.                         |
| 4. Hairs on plants without glands; fruit splitting early<br>because of unequal growth of the 2 halves ----- | <u>Tiarella cordifolia</u> |
| -Many hairs on plants glandular; fruit remaining intact<br>until maturity -----                             | <u>Saxifraga</u>           |

Philadelphus

- |   |                    |
|---|--------------------|
| 1. Stigma one; exterior base of flower hairy -----                  | <u>P. hirsutus</u> |
| -Stigmas more than 1 per flower; exterior base of flower glabrous - | <u>P. inodorus</u> |

Ribes

- |  |                         |
|--|-------------------------|
| 1. Stems spiny; wood not malodorous; fruit smooth -----                          | <u>R. rotundifolium</u> |
| -Stems free of spines; wood with a bad odor; fruit with<br>glandular hairs ----- | <u>R. glandulosum</u>   |

Saxifraga

- |   |  |
|---|--|
| 1. Leaves ovate to reniform with a long, winged petiole; stamen<br>filaments not club-shaped -----  | <u>S. careyana</u> +<br><u>S. virginiensis</u> |
| -Leaves several times longer than wide with a short, winged<br>petiole; filaments club-shaped ----- | <u>S. micranthidifolia</u>                     |

SCROPHYLARIACEAE

Key to genera

- |  |  |
|--|--|
| 1. Trees; flowers large, blue, appearing before the leaves ----- | <u>Paulownia tomentosa</u>                             |
| -Herbs -----   | 2.   |
| 2. Stamens with pollen 2 -----                                   | <u>Veronica serpyllifolia</u>                          |
| -Stamens with pollen 4 -----                                     | 3.   |
| 3. Corolla distinctly 2-lipped -----                             | <u>Penstemon canescens</u> +<br><u>P. brevisepalus</u> |
| - Corolla not distinctly 2-lipped -----                          | 4.   |
| 4. Bracts subtending flowers scarlet, showy -----                | <u>Castilleja coccinea</u>                             |
| -Bracts green -----  | <u>Pedicularis canadensis</u>                          |

STAPHYLEACEAE

One genus and species: Staphylea trifolia

STYRACACEAE

One genus and species: Halesia carolina



ULMACEAE

Key to genera

1. Flowers appearing before leaves on last year's twigs; fruit flattened and winged ----- Ulmus  
 -Flowers appearing with leaves on this year's twigs; fruit a drupe ----- Celtis laevigata

Ulmus

1. Twigs winged; fruits dark, with very narrow wings ----- U. alata  
 -Twigs without wings; fruits green, with wings as wide as seeds --- U. americana

UMBELLIFERAE

Key to genera

1. All leaf-blades simple, almost circular ----- Hydrocotyle americana  
 -Some leaf-blades compound or highly dissected ----- 2.  
     2. Leaf-blades palmately dissected or compound ----- Sanicula gregaria  
     -Leaf-blades not palmately divided ----- 3.  
 3. Fruits 6-8 times as long as broad ----- Osmorhiza claytoni  
 -Fruits not over 4 times as long as broad ----- 4.  
     4. Fruit with barbed prickles ----- Daucus carota  
     -Fruit ridged but without barbed prickles ----- Zizia

Zizia

1. Nearly all leaves ternately compound ----- Z. aurea  
 -Most of basal leaves simple ----- Z. aptera

VIOLACEAE

Key to genera

1. Plants more than 1 ft. tall; flowers green ----- Hybanthus concolor  
 -Plants less than 10 in. tall; flowers not green ----- Viola

Viola

1. Flowers appearing from an upright stem ----- 2.  
 -Flowers individually appearing from a subterranean or short stem at the ground level ----- 9.  
     2. Stipules deeply fringed; style enlarged toward the stigma into a globose summit ----- V. kitaibeliana var. rafinesquii  
     - Stipules entire or with sharp teeth or shallow fringes; style not enlarged upward ----- 2a.  
         2a. Corollas yellow, or white turning blue with age ----- 3.  
         2a. Corollas not yellow, if white not turning blue with age - 6.  
 3. Corolla white, turning pale blue with age ----- V. canadensis  
 -Corolla yellow ----- 4.  
     4. Some of the petals purplish on the back; leaves hastate, rhombic, or 3-parted ----- 5.



-None of the petals purplish on the back; leaves ovate, acute -----	V. <u>pensylvanica</u>
5. Leaves hastate, slenderly acuminate -----	V. <u>hastata</u>
-Leaves 3-parted or rhombic, slenderly acute -----	V. <u>tripartita</u>
6. Corolla pale cream to white -----	V. <u>striata</u>
-Corolla some shade of blue -----	7.
7. Lateral petals without hairs; spurs of petal 1 cm or more long --	V. <u>rostrata</u>
-Lateral petals with hairs, spurs of petal 8 mm or less long ----	8.
8. Plants stoloniferous; flowers blue -----	V. <u>walteri</u>
-Plants not stoloniferous; flowers pale blue -----	V. <u>conspersa</u>
9. Leaves pedately compound; corolla usually blue, without hairs ---	V. <u>pedata</u> var.
If 2 petals are deep purple -----	<u>lineariloba</u>
-Leaves not pedately compound; corolla with hairs, if blue -----	var. <u>pedata</u>
10. Petals some shade of blue (excluding albinos) -----	10.
-Petals white or yellow -----	11.
11. Rhizomes slender, 4 mm or less in diameter -----	29.
-Rhizomes not thread-like, usually more than 5mm in diameter ----	V. <u>odorata</u>
12. Main leaf-blades not usually deeply lobed or divided ----	12.
-Main leaf-blades lobed or compound -----	13.
13. Young leaves and flower-stalks usually without hairs -----	22.
-Young leaves and flower-stalks with hairs -----	13a.
13a. Hairs of lateral petals with enlarged tips, plants of wet, swampy areas -----	16.
-Hairs of lateral petals not enlarged at tips, plants of moist to dry sites -----	V. <u>cucullata</u>
14. Leaf-blades rather uniformly toothed along the margin -----	14.
14a. Hairs on base of the spurred petal -----	14a.
14a. No hairs on the base of spurred petal -----	V. <u>affinis</u>
-Leaf blades with larger teeth near the base -----	V. <u>papilionacea</u>
15. Leaf-blades 2 to 3 times as long as broad; leaves and flower stalks about the same length -----	15.
-Leaf blades $\frac{1}{2}$ to nearly as broad as long; leaves longer than the flower-stalks -----	V. <u>sagittata</u>
16. Leaf-blades without hairs below -----	V. <u>emarginata</u>
-Leaf-blades with hairs on both sides of leaves -----	17.
17. Leaf-blades purplish below, with pale areas on the upper surface; sepals with few cilia -----	18.
-Leaf-blades green; sepals with many cilia -----	V. <u>hirsutula</u>
18. Some part of the sepals with cilia -----	V. <u>septentrionalis</u>
-Sepals lacking cilia -----	19.
19. Spurred petal with few or no hairs at the base -----	V. <u>sagittata</u>
-Spurred petal very hairy at the base -----	V. <u>sororia</u>
20. Blades of leaves with much larger teeth at the base -----	20.
-Blades of leaves with more or less uniform teeth -----	V. <u>fimbriatula</u>
21. Sepal-margins with many cilia; leaf-blades all uncut ---	21.
-Sepal-margins with few or no cilia; leaf blades sometimes lobed -----	V. <u>septentrionalis</u>
22. Leaves hairy -----	V. <u>triloba</u>
-Leaves essentially without hair -----	23.
23. Leaf-blades somewhat elongate; small lobes on basal margins of blades -----	26.
-Leaf-blades cordate-ovate; blades with larger lobes which are not strictly basal. -----	24.
	25.



- 24. Leaf-blades very hairy; sepals with cilia ----- V. fimbriatula
- Leaf-blades with few or no hairs; sepals with few or no cilia---- V. sagittata
- 25. All leaves deeply lobed ----- V. palmata
- Leaves of a plant both unlobed and with 3 broad lobes
- (including var. dilatata)----- V. triloba
- 26. Leaf-blades rather narrow with small lobes near the base ----- 27.
- Leaf-blades broad; lobes not strictly basal ----- 28.
- 27. Leaves longer than the flowers ----- V. emarginata
- Leaves of same length or shorter than the flowers ----- V. sagittata
- 28. Most of the leaves deeply lobed ----- V. brittoniana
- Some of the leaves unlobed ----- V. septemloba
- 29. Petals yellow ----- V. rotundifolia
- Petals white ----- 30.
- 30. Leaf - blades small, rounded at the apex, without hairs ----- V. pallens
- Leaf-blades acute at the apex, with hairs ----- 31.
- 31. Leaf-blades without hairs beneath; petioles and
- flower-stalks reddish; lateral petals without hairs----- V. blanda
- Leaf-blades with hairs beneath; petioles and flower-stalks
- green; lateral petals with hairs ----- V. incognita



KEYS TO COMMON TREES  
Summer Key to Genera

1. Leaves needle-like or scale-like - - - - - 2
2. Leaves opposite or whorled - - - - - 3
  3. Branchlets flattened - - - - Thuja occidentalis (white cedar; arbor vitae)
  3. Branchlets not flattened - - - - Juniperus virginiana (red cedar)
2. Leaves alternate or in clusters on alternate dwarf branches - - - - - 4
  4. Leaves in clusters on dwarf branches - - - - - 5
    5. Leaves in clusters of 2-5 - - - - - Pinus
    5. Leaves in clusters of more than 5 - - - - Larix laricina (larch; tamarack)
  4. Leaves solitary - - - - - 6
    6. Leaves flattened - - - - - 7
      7. Branchlets roughened twig scars; bark of branches shedding in long papery strips - - - - - Taxodium distichum (bald cypress)
      7. Branchlets without twig scars; bark of branches not shedding - - 8
        8. Leaves mostly projecting in one plane from two sides of twig; deciduous when dry; branchlets with persistent leafstalks - - - - - Tsuga canadensis (hemlock)
        8. Leaves projecting from twig in more than one plane, persistent even when dry; branchlets without persistent leaf stalks - - -9
          9. Leaf scars decurrent; leaves stalked - - - - -
          9. Leaf scars circular; leaves sessile - Abies balsamea (balsam fir)
    6. Leaves not flattened - - - - - Picea
  1. Leaves broad, not needle-like or scale-like - - - - - 10
  10. Leaves compound - - - - - 11
    11. Leaves opposite - - - - - 12
      12. Leaves palmately compound - - - - - Aesculus
      12. Leaves pinnately compound - - - - - -13
        13. Blades composed of 3-5 leaflets - - - - - -14
          14. Margin of blade coarsely toothed - - - - - Acer
          14. Margin of blade finely toothed - Staphylea trifolia (bladdernut)
        13. Blades composed of 5-13 leaflets - - - - - (fraxinus)
      11. Leaves alternate - - - - - 15
        15. Leaves doubly compound (leaflets compound) - - - - - 16
          16. Petioles prickly - - - - Aralia spinosa (Devil's walking stick; Hercules club)
          16. Petioles not prickly - - - - - -17
            17. Margin of blades coarsely toothed - - - - -
            17. Margin of blades finely toothed or entire - - - - - -18
              18. Stems with thorns; tips of leaf divisions rounded - - - - - Gleditsia triacanthos (honey locust)
              18. Stems without thorns; tips of leaf divisions acute - - - - - Gymnocladus dioica (Kentucky coffee tree)
      15. Leaves once compound (leaflets simple) - - - - - 19
        19. Blades composed of 3 leaflets - Ptelea trifoliata (hop tree; wafer ash)
        19. Blades composed of more than 3 leaflets - - - - - 20
          20. Margin of leaflets regularly sharp-toothed - - - - - 21
            21. Blades composed of 5-11 leaflets - - - - - -22
              22. Rachises and stems prickly; wood yellow - - - - -
              22. Prickles absent; wood nearly white - - - - Carya



n

- 21. Blades composed of 11-31 leaflets - - - - - 23
  - 23. Pith chambered - - - - - Juglans
  - 23. Pith continuous - - - - - Rhus
- 20. Margin of leaflets not regularly sharp-toothed; margin with 1 or 2 sharp teeth, with small rounded teeth, or entire - - - - - 24
  - 24. Blades composed of an even number of leaflets - - 25
    - 25. Leaflets less than 25 mm long, elliptical; stems often with branched thorns - - - - -  
- - - - - Gleditsia triacanthos (honey locust)
    - 25. Leaflets more than 25 mm long; with acute tips; stems without thorns - Sapindus Drummonai (soap-berry)
  - 24. Blades composed of an odd number of leaflets - - 26
    - 26. Leaflets less than 25 mm long, elliptical, without glandular teeth - - - - -  
- - - - - Robinia Pseudo-Acacia (black locust)
    - 26. Leaflets more than 25 mm long, with acute tips, with 1 or 2 glandular teeth near base - - - - -  
- - - - - Ailanthus altissima (ailanthus; tree of heaven)
- 10. Leaves simple - - - - - 27
  - 27. Leaves opposite or whorled - - - - - 28
    - 28. Leaves in whorls of 3 - - - - - Catalpa
    - 28. Leaves opposite or sub-opposite - - - - - 29
      - 29. Leaves palmately lobed - - - - - Acer
      - 29. Leaves not lobed - - - - - 30
    - 30. Margin of blades toothed - - - - - 31
      - 31. Leaves mostly sub-opposite, twigs grey often terminating as thorns; pith circular in cross section - - - - -  
- - - - - Rhamnus cathartica (buckthorn)
      - 31. Leaves mostly opposite; twigs reddish or greenish without thorns; pith 4-angled in cross section - -  
- - - - - Euonymus atropurpureus (wahoo; burning bush)
    - 30. Margin of blades entire - - - - - 32
      - 32. Terminal bud absent; twig terminated by a pair of axillary buds - - - - - Syringa vulgaris (lilac)
      - 32. Terminal bud present - - Cornus florida (flowering dogwood)
  - 27. Leaves alternate - - - - - 33
    - 33. Leaves fan-shaped, with dichotomous venation - - - - -  
- - - - - Ginkgo biloba (ginkgo; maidenhair tree)
    - 33. Leaves not fan-shaped, with pinnate or palmate venation - - - 34
      - 34. Crushed leaves with a spicy odor - - - - - Sassafras albidum  
(sassafras)
      - 34. Leaves without a spicy odor - - - - - 35
        - 35. Stipules or stipule scars encircling twigs completely or nearly so - - - - - 36
        - 36. Leaves palmately lobed; lateral buds enclosed by petiole bases - - - - - Platanus occidentalis (sycamore; plane tree)
        - 36. Leaves no palmately lobed; lateral buds exposed - - 37
        - 37. Tips of blades acute - - - - - 38
          - 38. Margins of blade coarsely toothed - - - - -  
- - - - - Fagus grandifolia (beech)
          - 38. Margins of blade entire - - - - - Magnolia



37. Tips of blades truncate - - - - -
- - - - - Liriodendron tulipifera (tulip tree; yellow poplar)
35. Stipules or stipule scars not encircling twigs - - - - - 39
39. Blades star-shaped- - - - - Liquidambar styraciflua (red Gum; sweet gum) 40
39. Blades not star-shaped - - - - - 40
40. Leaves and buds crowded at tips of twigs - - - - - Quercus
40. Leaves and buds distributed evenly on twigs, not crowded at tips - - - - - 41
41. Leaves with milky sap - - - - - 42
42. Margin of blades entire - Maclura pomifera (osage orange)
42. Margin of blades toothed - - - - - Morus
41. Leaves without milky sap - - - - - 43
43. Margin of blades entire- - - - - 44
44. Blades broadly heart-shaped - - - - -
- - - - - Cercis canadensis (redbud; Judas tree)
44. Blades not broadly heart-shaped - - - - - 45
45. Leaves mostly shorter than 15 cm; buds not velvety - - - - - 46
46. Leaves in 2 ranks; pith continuous - - - - -
- - - - - Diospyros virginiana (persimmon)
46. Leaves in more than 2 ranks; pith with transverse woody plates- - - - -
- - - - - Nyssa sylvatica (sour gum; tupelo)
45. Leaves mostly longer than 15 cm; buds velvety - - - - -
- - - - - Asimina triloba (papaw)
43. Margin of blades toothed - - - - - 47
47. Petioles with 1 or more pairs of glands near base of blade - - - - - Prunus
47. Petioles without paired glands - - - - - 48
48. Bud scales one per bud, hood-like - - - - -
- - - - - Salix spp. (willow)
48. Bud scales more than one per bud - - - - - 49
49. Leaves in more than two ranks - - - - - 50
50. Lowest scale on axillary bud centered over petiole base - - - - - Populus
50. Lowest scale on axillary bud not centered over petiole base - - - - - 51
51. Stems with sharp-pointed leafless thorns; bud scales fleshy - - - - -
- - - - - Crataegus spp. (hawthorn)
51. Stems without sharp-pointed leafless thorns; short, spur-like, leafy branches often present; bud scales thin - - - - - Pyrus
49. Leaves in two ranks - - - - - 52
52. Buds slender, at least 4 times as long as broad-Amelanchier canadensis (Juneberry)
52. Buds plump, less than 4 times as long as broad - - - - - 53
53. Buds with 2 or 3 visible bud scales - - - - - -54
54. Bud scales in two ranks - - - - -
- - - - - Ulmus
54. Bud scales in more than two ranks - - - - - 55

- 55. Blades with 3 main veins from base; pith chambered at nodes - - - - - Celtis
  - 55. Blades with 1 main vein from base; pith continuous - - - - - 56
  - 56. Bud scales with minute longitudinal ridges - - - - - Ostrya virginiana (hop hornbeam; ironwood)
  - 56. Bud scales without minute longitudinal striations - - - - - 57
  - 57. Buds square in cross section, not appressed - Carpinus caroliniana (~~blue beech~~; ironwood)
  - 57. Buds wither circular in cross section or somewhat angular, flattened, and appressed - - - - - Betula
- Beech  
not



KEYS TO SPECIES

Acer (maple)

Summer key

- 1. Leaves compound - - - - - A. Negundo (box-elder; ash-leaved maple; Manitoba maple) 2
- 1. Leaves simple - - - - - 2
  - 2. Lower surface of leaves distinctly silvery - - - - - 3
    - 3. Margins of blade with sharp teeth; buds red - - - - - 4
      - 4. Margin of terminal lobe of leaf straight at base - - - - -
        - - - - - A. rubrum (red maple; soft maple)
        - 4. Margin of terminal lobe of leaf curved at base - - - - -
          - - - - - A. saccharinum (silver maple; soft maple)
      - 3. Margins of blade with blunt teeth; buds green - - - - -
        - - - - - A. Pseudo-Platanus (Sycamore maple)
    - 2. Lower surface of leaves not distinctly silvery - - - - - 5
      - 5. Leaves with milky sap buds green or red, plump - - - - -
        - - - - - A. platanoides (Norway maple)
      - 5. Leaves without milky sap; buds brown or greyish tan, not maple - - - 6
        - 6. Lower surface of leaves somewhat wooly; tip of terminal lobe of blade not flanked by two acute projections - - - - -
          - - - - - A. nigrum (black maple) (hard maple)
          - 6. Lower surface of leaves smooth; tip of terminal lobe of blade flanked by two acute projections - - A. saccharum (sugar maple; hard maple)

Aesculus (buckeye and horse-chestnut)

- 1. Surface of buds sticky; blade composed of 7 leaflets - - - - -
  - - - - - A. Hippocastanum (horse-chestnut)
- 1. Surface of buds not sticky; blade composed of 5 leaflets - - - - -
  - - - - - A. glabra (Ohio buckeye)

Betula (birch)

- 1. Bark of trunk white or nearly so - - - - - 2
  - 2. Bark of trunk dull, chalky, not peeling readily in thin papery sheets - - - - - B. populifolia (white, grey, or old field birch)
  - 2. Bark of trunk lustrous, peeling readily in thin papery sheets - - - - - 3
    - 3. Leaves and twigs not hairy - - - - - B. pendula (European birch)
    - 3. Twigs slightly hairy; lower surface of leaves hairy, at least along the veins or in their axils - - - - - 4
      - 4. Surface of buds with abundant resin - - - - - B. alba (white birch)
      - 4. Surface of buds with little or no resin - - - - -
        - - - - - B. papyrifera (paper, canoe, or white birch)
  - 1. Bark of trunk not white - - - - - 5
    - 5. Axillary buds flattened and appressed; bark not wintergreen flavored - - - - - B. nigra (river or red birch)
    - 5. Axillary buds not flattened, divergent; bark with wintergreen flavor - - 6
      - 6. Bark of trunk peeling in thin sheets, yellowish or silvery grey; buds often hairy - - - - - B. lutea (yellow or grey birch)
      - 6. Bark of trunk not peeling, dark brown; buds not hairy - - - - -
        - - - - - B. lenta (black, cherry, or sweet birch)



Carya (hickory)

1. Buds distinctly yellow; bud scales 2 or 3, not overlapping - - - - - 2
2. Buds- mustard yellow, rough; blade composed of 5-9 leaflets - - - - - C. cordiformis (bitternut, swamp hickory)
2. Buds with bright yellow hairs; blade composed of 9-17 leaflets - - - - -  
- - - - - C. illinoensis (pecan)
1. Buds olive or brownish; buds scales numerous, overlapping - - - - - 3
3. Terminal bud less than 10 mm long; twigs slender - - - - - C. glabra (pignut)
3. Terminal bud more than 10 mm long; twigs stout- - - - - 4
4. Bark on trunk not shaggy; terminal buds broadly egg-shaped; lower surface of blades hairy - C. tomentosa (mockernut)
4. Bark on trunk shaggy; terminal buds narrowly egg-shaped; leaves smooth -5
5. Twigs tan; blades composed of 7-9 leaflets - - - - - C. laciniosa (big shellbark hickory, king nut)
5. Twigs reddish brown; blades composed of 5 leaflets - - - - - C. ovata (shagbark or shellbark hickory)

Catalpa (catalpa)

1. Crown tall and slender; bruised bark with an unpleasant odor - - - - - C. speciosa (western catalpa; Indian bean; cigar tree)
1. Crown spreading; bark without unpleasant odor - - - - - C. bignonioides (common catalpa)

Fraxinus (ash)

Summer key

1. Twigs square in cross section - - - - - F. quadrangulata (blue ash)
1. Twigs circular or elliptical in cross section - - - - - 2
2. Twigs hairy - - - - - F. pennsylvanica (red ash)
2. Twigs smooth - - - - - 3
3. Leaflets sessile, usually 9-11 per leaf - - - - - F. nigra (black ash)
3. Leaflets stalked, usually 7 per leaf - - - - - 4
4. Axillary buds distinctly flattened - F. pennsylvanica var. subintegrifolia (green ash)
4. Axillary buds not distinctly flattened - - F. americana (white ash)

Juglans (walnut)

1. Leaf scar with velvety line along upper margin; pith chocolate colored - - - - - J. cinerea (butternut)
1. Leaf scar without velvety line; pith coffee colored- - J. nigra (black walnut)

Magnolia (magnolia)

1. Leaves mostly longer than 15 cm; leaf scars linear, V-shaped - - - - -  
- - - - - M. acuminata (cucumber tree)
1. Leaves mostly shorter than 15 cm; leaf scars broad, crescent shaped - - - - - M. virginiana (small magnolia, sweetbay)

Morus (mulberry)

1. Buds less than 5 mm long; appressed - - - - - M. alba (white mulberry)
1. Buds more than 5 mm long; not appressed - - - - - M. rubra (red mulberry)



Picea (spruce)

- 1. Leaves bluish green or silvery; twigs stout - - P. pungens (Colorado blue spruce)
- 1. Leaves dark green; twigs slender - - - - - P. Abies (Norway spruce)

Pinus (pine)

- 1. Leaves in clusters of 3 or 5 - - - - - 2
- 2. Leaves in clusters of 5 - - - - - P. Strobus (white pine)
- 2. Leaves in clusters of 3 - - - - - 3
  - 3. Leaves less than 15 cm long - - - - - P. rigida (pitch pine)
  - 3. Leaves more than 15 cm long - - - - - P. palustris (long-leaved pine)
- 1. Leaves in clusters of 2 - - - - - 4
  - 4. Leaves more than 10 cm long - - - - - 5
    - 5. Leaves thick, stiff - - - - - P. nigra var. austriaca (Austrian pine)
    - 5. Leaves thin, flexible - - - - - P. resinosa (red pine; Norway pine)
  - 4. Leaves less than 10 cm long - - - - - 6
    - 6. Leaves over 3 cm long - - - - - P. sylvestris (Scotch pine)
    - 6. Leaves less than 3 cm long - - - - - P. Banksiana (jack pine)

Populus (poplar)

Summer key

- 1. Petioles flattened - - - - - 2
- 2. Blades oval - - - - - 3
  - 3. Margin of blade with more than 20 teeth - P. tremuloides (quaking or trembling aspen)
  - 3. Margin of blade with fewer than 20 teeth - P. grandidentata (large-toothed aspen)
- 2. Blades triangular - - - - - 4
  - 4. Axillary buds appressed, nearly as large as terminal bud; branches strongly ascending - P. nigra var. italica (Lombardy poplar)
  - 4. Axillary buds not appressed, much smaller than terminal bud; branches not strongly ascending - - - - P. deltoides (cottonwood)
- 1. Petiole not flattened - - - - - 5
  - 5. Lower surface of blade densely white wooly - - - P. alba (silver or white poplar)
  - 5. Lower surface of blade not densely wooly - - - P. balsamifera (balsam poplar; tamarac)

Prunus (plum, peach, cherry)

- 1. Terminal bud absent - - - - - 2
- 2. Bud scales velvety or hairy - - - - - 3
  - 3. Bud scales velvety - - - - - P. domestica (garden plum)
  - 3. Bud scales coarsely hairy - - - - - P. hortulana (wild goose plum)
- 2. Bud scales smooth - - - - - 4
  - 4. Twigs smooth - - - - - P. americana (American plum)
  - 4. Twigs hairy - - - - - P. Americana var. lantana (wild plum)
- 1. Terminal bud present - - - - - 5
  - 5. Bud scales fuzzy - - - - - P. Persica (peach)
  - 5. Bud scales smooth - - - - - 6
    - 6. Fruit spurs present with terminally clustered flower buds - - - - - P. Cerasus (sour cherry)
    - 6. Fruit spurs absent - - - - - 7
      - 7. Buds over 5 mm long; bud scales with grey margins, blunt tipped - - - - - P. virginiana (choke cherry)



Pyrus (apple, pear)

- 1. Crown of tree spreading; buds reddish - - - - - 2
- 2. Buds somewhat hairy; lower surface of blades hairy; young leaves rolled lengthwise in buds - - - - - P. Malus (apple)
- 2. Buds and leaves not hairy; young leaves folded lengthwise in buds - - - - - P. coronaria (wild crab)
- 1. Crown of tree slender; buds brownish - - - - - P. communis (common pear)

Quercus (oak)

Summer key

- 1. Tips of principal veins included in blade, not extending beyond the margins as bristles (white oaks) - - - - - 2
- 2. Blades distinctly pinnately lobed - - - - - 3
- 3. Lower surface of blade smooth - - - - - Q. alba (white oak)
- 3. Lower surface of blade hairy - - - - - 4
- 4. Upper surface of blade rough, with star-shaped hairs - - - - - Q. stellata (post oak)
- 4. Upper surface of blade smooth - - - Q. macrocarpa (bur oak; mossy-cup oak)
- 2. Blades not distinctly pinnately lobed; margin of blade with coarse teeth - 5
- 5. Teeth somewhat irregular, with rounded tips - - Q. bicolor (swamp white oak)
- 5. Teeth regular, with pointed tips - - - - Q. Muhlenbergii (yellow oak)
- 1. Tips of principal veins extending beyond the margin of the blades as bristles (black or red oaks) - - - - - 6
- 6. Blades not lobed - - - - - Q. imbricaria (shingle oak)
- 6. Blades lobed - - - - - 7
- 7. Blade decidedly broadest near tip; lobes somewhat square tipped - - - - - Q. marilandica (barren oak; blackjack)
- 7. Blade mostly broadest at mid-point, pinnately lobed - - - - - 8
- 8. Width of blades, at the base of the longest lobes, nearly equal to the length of the longest lobes - - - - - 9
- 9. Buds grey-hairy, sharply angular in cross section - - - - - Q. velutina (black oak)
- 9. Buds smooth, and not sharply angular in cross section - - - - - Q. rubra (red oak)
- 8. Width of blades, at the base of the longest lobes, less than half the length of the longest lobe - - - - - -10
- 10. Lower surface of blades smooth - - Q. coccinea (scarlet oak)
- 10. Lower surface of blade with clusters of long hairs in the axils of the principal veins - - - - - -11
- 11. Blades mostly shorter than 15 cm; acorns spherical - - - - - Q. palustris (pin oak)
- 11. Blades mostly longer than 15 cm; acorns egg-shaped - - - - - Q. shumardii (Shumard's red oak)

Rhus (sumac)

- 1. Twigs hairy - - - - - R. typhina (staghorn sumac)
- 1. Twigs smooth - - - - - R. glabra (smooth sumac)



Ulmus (elm)

- 1. Bud scales rust colored, densely hairy - - - - U. rubra (slippery elm; red elm)
- 1. Bud scales brown, not densely hairy - - - - - 2
- 2. Corky, wing-like ridges present on branches -U. Thomasi (cork elm; rock elm)
- 2. Corky ridges absent - - - - - 3
- 3. Bud scales light brown with dark margins; twigs smooth or slightly hairy - - - - - 4
- 4. Twigs grey, very slender; buds blunt - - - U. pumila (Chinese elm)
- 4. Twigs brown, not very slender; buds pointed - - - - - U. americana (American elm; white elm)
- 3. Bud scales dark brown or nearly black; twigs coarsely hairy - - - - - U. glabra (Scotch elm)

| <u>Common Name</u>        | <u>Collected By</u>                               | <u>Use</u>   | <u>Instructions</u>  | <u>Scientific Name</u>    |
|---------------------------|---|--|--|---------------------------|
| Calanus                   | Eddie Hughes<br>Rodney Stocton                    | stomach ache   | Chew and eat.  |                           |
| Peppermint                | Marcy Webb  | coughing   | Look it, wash it, boil it, strain it through a whitecloth, add a little sugar, warm it up, and then drink it | Peppermint<br>(Spearmint) |
| Ground Ivy                | Danny Blevins<br>Rodney Stocton<br>Melissia Shell | hives  | Boil and make tea out of the leaves of the plant.  |                           |
| Platutain                 | Danny Blevins                                     | takes swelling and inflammation out of boils and bruises | Soak the leaves in warm water and place like a poultice on a boil or bruise.                                 | Plantago<br>Major         |
| Plantain                  | Melissia Shell                                    | bee stings   | Break the leaves and squeeze the juice on the sting. It takes the poison out.<br>(Hollow Stem)               | Plantago<br>Major         |
| Mullien                   | Karen Shaw  | stomachache, inflammations, nervous disorders            | Boil leaves with other ingredients and serve as a tea.   |                           |
| Stignard                  | Rodney Stocton                                    | stomachache  | Dig up the roots and wash them off. Put roots in a pot of boiling water.                                     |                           |
| Wild Pusley<br>(Purslane) | Marcy Webb  | burns  | Look it, wash it, cut up fine, put in a thin whitecloth, mash it up, and apply to the burn.                  | Portulaca<br>Olevacea     |
| Ginseng                   | Danny Blevins                                     | cure the chicken pox, measles, and colic in babies       | Boil the Ginseng into a tea.   |                           |
| Spicewood                 | Karen Shaw  | bring the sweat out of fever                             | Dry out spicewood and steep overnight; sweeten to taste. Usually used during fevers.                         |                           |
| Elm                       | Melissia Shell                                    | kidney and stomach problems                              | Boil the bark and make a tea.  |                           |
| Catnip                    | Melissia Shell<br>Rodney Stocton<br>Joey Farmer   | fever, chest cold, hives, colic                          | Gather the leaves and put in a pot of boiling water.   |                           |



| <u>Common Name</u>   | <u>Collected By</u>            | <u>Use</u>                            | <u>Instructions</u>   | <u>Scientific Name</u>    |
|----------------------|--------------------------------|---------------------------------------|---|---------------------------|
| Red Rattleroot       | Eddie Hughes                   | children's diarrhea                   | Dig red rattleroot and boil a tea. Can also be used on cattle.  |                           |
| Butterfly Root       | Eddie Hughes                   | side pleurisy                         | Boil butterfly root and feed the tea to a sick person. Also works for appendicitis.   |                           |
| Yellow Popular       | Eddie Hughes                   | cure for yellow jaundice              | Go to the south side of a yellow popular; peel off the bark, boil it and feed the tea to a sick person.   |                           |
| Wall-enk             | Eddie Hughes                   | break out the measles                 | Make a tea of "wall-enk", and feed it to the sick person.   |                           |
| Dittany & Pennyroyal | Eddie Hughes                   | break a fever                         | Make a tea of mountain dittany and pennyroyal (boil them). Then add a half-pint of whiskey. Feed it to the person a little at a time until they have sweated well and the fever is broken.  |                           |
| Boneset              | Rodney Stocton                 | treat colds, coughs, and constipation | Dry the leaves and make a tonic called boneset tea.   | Eupatorium<br>Perfoliatum |
| Burvine              | Charlie Webb                   | colds and fever                       | Wash it well, put water over it, boil it for about half an hour or more, then strain it through a whitecloth. It is ready to drink: hot or cold. Add as much sugar as desired.  |                           |
| Pink Lady Slipper    | Rodney Stocton                 |                                       |   | Cypripedium<br>acaule     |
| Yellow Root          | Rodney Stocton<br>Eddie Hughes | cupping a baby for the hives          | Rub the baby's left shoulder to numb it, making a small incision with a razor blade. Take a thimble with a hole in the bottom of it and place it over the incision. Suck on it until a few drops of blood come up into the bottom of the thimble. Take three drops of the blood. Add it to breast milk and feed it to the baby. | Xanthorhiza               |
|                      | Eddie Hughes                   | smallpox                              | Put the sick person in the air. Put wet hand towels on his head and take all the covers off them.   |                           |

## BEECH

Leaves and bark contain wonderful medical properties for stomach troubles, ulcers, liver, kidneys, bladder, diabetes to produce appetite and is an excellent tonic.

The leaves are soothing to the nerves and soothing to the sores and wounds for both men and beast. Make a tea by taking a heaping teaspoonful to the cup of boiling water and let steep one-half hour. Take three or four full cups a day; one, one hour before each meal and one upon retiring.

## MAPLE

The inner bark of the maple and also its leaves are a splendid medicine for both liver and spleen and are very soothing to these organs. It is a good medicine for the whole body.

Take one healing teaspoonsful to the cup of boiling water. One to three cups daily may be taken on an empty stomach. Sometimes when there is a pain in the liver or spleen, taking wine glass full every hour or two has a splendid effect.

## OAK

The inner bark of the lofty oak has wonderful healing properties, as do the leaves and acorn cups. A tea of the bark and the powder of the cups are excellent for bleeding at the mouth, spitting of blood and to stay vomiting or other fluxes in both men and women. The powder of the acorn made into a tea resists the poison of venomous creatures. A tea made from the acorns and bark resists the force of poisonous medicines and will also check the involuntary passing of the natural seed. It is also excellent for ulcerated and bloody urine. The distilled water of the buds, before they become leaves are used either outwardly



or inwardly for inflammations, burning fevers and infections. It is also very effective in deeses of leucorrhœa, womb troubles, piles, troubles in the rectum, hemorrhages, varicose veins, to normalize the kidneys, liver and spleen, goiter harden neck, tumors, and swelling. Use one ounce of the bark steeped in a pint of water. Inject for leucorrhœa. Good in enemias for colon trouble, in gonorrhœa, gleet, and leucorrhœa.

## PEACH TREE

Leaves are the most healing and specific remedy for jaundice, dyspepsia, fever, stomach troubles, worms and are useful to stop vomiting or morning sickness in pregnancy and as a laxative.

## CHERRY TREE

The bark is one of our most wonderful remedies to loosen phlegm in the throat and chest for tuberculosis, coughs, bronchitis, heart troubles, stomach trouble, dyspepsia, fever and high blood pressure.

## APPLE TREE BARK

Botanical Name - Pyrus Malus

Tea made from apple tree bark is an old-fashioned remedy, which is excellent in intermittent fever, biliousness, and for gravel in the bladder, to induce perspiration; good for suppressed menstruation, digestion, nausea, vomiting, low fever, liver, spleen, kidneys, bladder, dripping in bowels, dysentery, boils, insect stings, mad dog bites, and toothache.

## CORN SILK

Botanical Name - Zea Mays

Corn silk is one of the best remedies for kidneys and bladder troubles. Where there is trouble with the prostate gland in urinating; also for painful urination. Useful to prevent bedwetting.

## MILKWEED

Botanical Name - Asclepias Syriaca

A remedy for female complaints of bowel and kidney trouble; increases flow of urine; therefore, is good in dropsy; also good for asthma, stomach troubles, and scrofulous condition of the blood.

Effective remedy for gallstones. Is much used in place of lobelia; take equal parts of milkweed and marshmallow; steep a teaspoonful in a cup of boiling water; take three cups daily and one hot upon retiring. It will expel gallstones



in a few days, when combined with this. Formentations applied to the liver and the liver thoroughly massaged at the same time is very effective.

#### LOBELIA

253

Botanical Name - Lobelia inflata

Lobelia reduces palpitation of the heart. It is fine in the treatment of all fevers and in pneumonia, meningitis, pleurisy, hepatitis, peritonitis, phrenitis, nephritis, and perositis. Mix with catnip and infusion morning and evening. It is excellent for very nervous patients.

#### STINGING NETTLE

Botanical Name - Urtica dioica

It is an excellent remedy for kidney trouble. It will expel gravel from the bladder and increase the flow of urine. It will kill and expel worms. For diarrhea, dysentery, piles, hemorrhages, hemorrhoids, gravel, inflammation of the kidneys; make a decoction using a teaspoonful to a cup of water and simmer for ten minutes. Boiled leaves well; stop bleeding almost immediately; rinse well, bring back the natural color of the hair and cure dandruff.

## PLANTS FOUND

1. Wild Basil-European variety.
2. Giant Ragweed
3. Bouncing Bet-Lavader colored-European variety
4. Ironweed-It's a prairie plant.
5. Purple Stemed Astor-There is 2 types of astors this time of year
6. Nut Grass-Cyprus
7. Candlewick-The pioneers used it as candlewick.
8. Boneset-3 members of this group. Old people believed that bones would heal faster if the cast was soaked in the juice of this plant.
9. Self-heal
10. Virgin Lower-The fruit dries and puffs out.
11. Queen Anne's Lace-In Kentucky it is known as chigger's nest. Same species as carrot.
12. Autumn Dandelion-Is simialiar to regular Dandelion.
13. Coral Fungus
14. Coral Reed Orchid-3 kinds
15. New York Fern
16. Cucumber root
17. Common Polydy Fern
18. Ebony Spleewort
19. Blue Beard Lily
20. False Solomn Seal
21. Canada Mayflower
22. Blazing Star
23. Striped Wintergreen
24. Devil's Bit
25. Eggar Lice
26. Roan Mountain Umbrella Plant-One of the strangest of plants.
27. Golden Glow
28. Stingin Needle-The sting caused by the plant is caused by FORMIC ACID.



29. Black Snake Root-or Rattlebox.
30. Curtis Golden Rod
31. Sweet Sicily-Black fruit. Smells like licorice. (2 types)
32. Jack-in-the-Pulpit-(3 kinds) One is green inside, one is purple inside and one is green and red.

33. Golden Bells-Blooms in the middle of May. Large golden flowers. Base of leaves. Bell-shaped flowers.
34. Quickweed-Is named that because it spreads so fast. Came from South American.
35. Ten Pedal Sunflower-Was thought extinct until 5 years ago then found on Roan. The only sunflower that has whitish color under leaves.
36. Indian Cucumber-Only 1 or 2 groups of leaves-(a whirl of leaves)
37. Flowering Raspberry
38. Harebell
39. Aerial leaf Astor
40. White Snakeroot-Makes cattle sick.
41. Joe Pie Weed-Epifagus
42. Beechdrop-Grows on the roots of a Beech tree only.
43. True Solomon's Seal
44. Closed Gentian
45. Stiff Gentian-The one with many blossoms. Comes up from seed annually. Only grows in disturbed areas.
46. Mountain Alder
47. Michitell St. John's Wort- Has interbreed with another breed.
48. Mountain Oak Grass-Most Common on Balds.
49. Appalachian Blackberry-HAS thorns.
50. Canadian Blackberry-HAS NO thorns.
51. Hair Grass
52. Tree Club Moss-It sheds its spores about the first frost.
53. Gooseberry
54. Roan Mountain Goldenrod
55. Wild Strawberry-or Virginia strawberry. Potentilla Triantonlia  
Arctic Species
56. Sharp-leaved Astor-They grow better in the woods.
57. Southern Lady Fern-Comes in very Dense groups.
58. Servisberrys-(3 kinds)
59. Bluets-Creeping flower.
60. Fair Cherrys
61. White Turtlehead- Very hard to find.



62. Saxifrench-Has little yellow flowers. Only grows on high elev.
63. Mountain Wood Fern-Dies back to the ground in the fall.
64. Mountain White Sorel
65. European Oxiallen
66. Austro Montano-Closed Gentain
67. Self-heal-(3 kinds)
68. True Huckleberry-Has Ten leaves.
69. True Blueberry-Has Five leaves.
70. Yellow Hawkweed-Is the closet relative of the dandelion.
71. Green Wood Orchid-Occurs all over the Roan. Also grows in the Rocky Mountains. One of the few plants the Appalachian region and the Rocky Mountains share.
72. Manzizzi Shrub
73. Gooseberry-It harvests a fungus that kills White Pine Tree. The fungus has to have 2 hosts.
74. Sand Mytle-Grows on high rocky ridges.

A CHECKLIST OF SOME PLANTS FOUND ON ROAN MOUNTAIN  
DURING PREVIOUS WILDFLOWER TOURS

| <u>Botanical Name</u>                   | <u>Common Name</u>                    |
|---|---------------------------------------|
| Actaea pachypoda (A. alba)              | White Baneberry, Doll's Eyes          |
| Anemone quinquefolia                    | Wood Anemone, True Anemone            |
| Anemonella thalictroides                | Rue-Anemone                           |
| Arisaema triphyllum                     | Indian Turnip, Jack-in-the-pulpit     |
| Aristolochia durior<br>(A. macrophylla) | Common Dutchman's Pipe                |
| Asarum canadense                        | Canada Wild-ginger                    |
| Caulophyllum thalictroides              | Blue Cohosh, Papoose-Root             |
| Claytonia virginica                     | Springbeauty                          |
| Delphinium tricorne                     | Rock Larkspur, Dwarf Blue Larkspur    |
| Dentaria diphylla                       | Crinkleroot Toothwort                 |
| Dentaria heterophylla                   | Crinkleroot                           |
| Dentaria laciniata                      | Cutleaf Toothwort                     |
| Dicentra canadensis                     | Squirrelcorn                          |
| Dicentra cucullaria                     | Dutchman's Breeches                   |
| Diphylleia oymosa                       | Umbrella-leaf                         |
| Disporum lanuginosum                    | Yellow Mandarin, Fairybells           |
| Erigeron pulchellus                     | Poor-robin's-plantain                 |
| Erythronium americanum                  | Fawnlily, Trout Lily, Dogtooth Violet |
| Fragaria virginiana                     | Strawberry                            |
| Galax aphylla                           | Wandflower, Beetleweed                |
| Geranium carolinianum                   | Carolina Cranesbill                   |
| Geranium maculatum                      | Wild Geranium                         |
| Glechoma hederacea                      | Gound Ivy, Gill-over-the-ground       |
| Hepatica acutiloba                      | Sharp-lobed Hepatica, Liverleaf       |
| Houstonia serpyllifolia                 | Creeping Bluets                       |
| Mitella diphylla                        | Common Miterwort, Bishop's Cap        |
| Orchis spectabilis                      | Showy Orchis                          |



Botanical NameCommon Name

|  |  |
|--|--|
| <i>Osmorhiza claytoni</i>                          | Sweet Cicely   |
| <i>Pedicularis canadensis</i>                      | Lousewort, Wood Betony                                   |
| <i>Phacelia bipinnatifida</i>                      | Looseflowered Phacelia                                   |
| <i>Phlox stolonifera</i>                           | Creeping Phlox   |
| <i>Ranunculus abortivus</i>                        | Kidney-leaf Crowfoot, Littleleaf<br>Buttercup            |
| <i>Sanguinaria canadensis</i>                      | Bloodroot, Red Puccoon                                   |
| <i>Saxifraga micranthidifolia</i>                  | Lettuce Saxifrage, Book<br>Lettuce, Branch Lettuce       |
| <i>Sedum ternatum</i>                              | Mountain Stonecrop                                       |
| <i>Senecio aureus</i>                              | Ragwort, Squaw Weed                                      |
| <i>Semilacina racemosa</i>                         | False Solomon's Seal, Wild<br>Spikemard, Solomon's Plume |
| <i>Stellaria pubera</i>                            | Great Cjockweed  |
| <i>Streptopus roseus</i>                           | Rose Mandarin, Twistedstalk                              |
| <i>Thalictrum dioicum</i>                          | Early Meadowrue  |
| <i>Tharella cordifolia</i>                         | Alleghany Foamflower                                     |
| <i>Trillium erectum</i>                            | Purple Trillium, Ill Scented<br>Trillium                 |
| <i>Trillium grandiflorum</i>                       | Large-flowered White-Trillium                            |
| <i>Trillium undulatum</i>                          | Painted Trillium   |
| <i>Uvularia grandiflora</i>                        | Large-flowered Bellwort                                  |
| <i>Viola blanda</i>                                | Sweet White Violet                                       |
| <i>Viola canadensis</i>                            | Canada Violet, Tall White<br>Violet                      |
| <i>Viola cucullata</i>                             | Marsh Blue Violet  |
| <i>Viola hastata</i>                               | Halberdleaf Yellow Violet                                |
| <i>Viola papilionacea</i>                          | Butterfly Violet   |
| <i>Viola pennsylvanica</i> ( <i>V. eriocarpa</i> ) | Smooth Yellow Violet                                     |
| <i>Viola rotundifolia</i>                          | Roundleaf Violet   |
| <i>Zizia aptera</i>                                | Zizia, Meadow Parsnip                                    |
| <i>Zizia aurea</i>                                 | Golden Alexanders  |
| <i>Aplectrum hymale</i>                            |  |
| <i>Conophilis americana</i>                        |  |

Bontanica Name

Common Name

Foam flower

Lycopodium

Helliboror

Luciduan

False



