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PRACTICAL GUIDE
TO THE
WILD FLOWERS &
FRUITS
BY
GEORGE LINCOLN WALTON, M.D.

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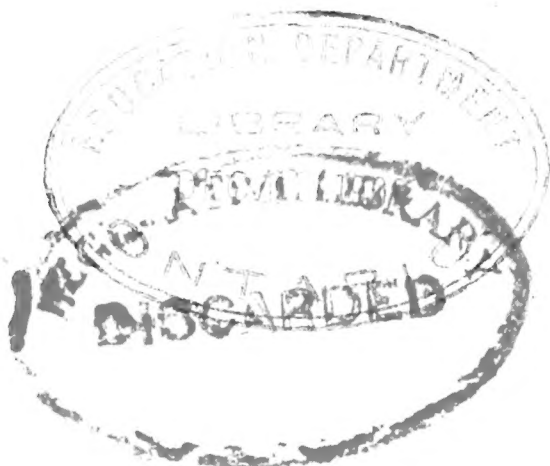
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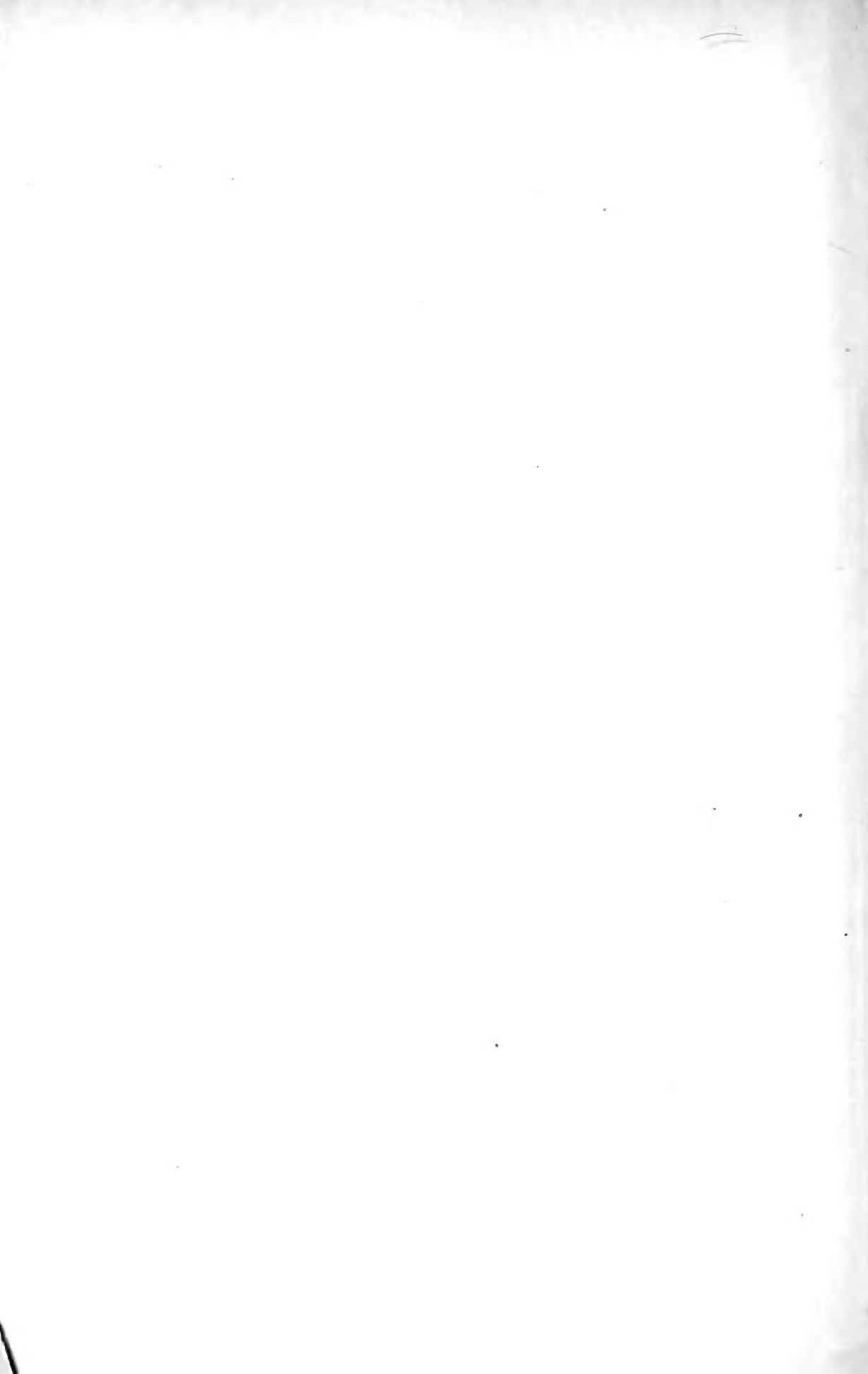
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WILD FLOWERS & FRUITS



PRACTICAL GUIDE
TO THE
WILD FLOWERS
AND FRUITS

BY
GEORGE LINCOLN WALTON, M.D.

" Beauties he lately slighted as he passed
Seem all created since he travell'd last."
COWPER

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To

MY FRIEND AND FORMER INSTRUCTOR

GEORGE LINCOLN GOODALE

IN THE HOPE THAT HE WILL VIEW WITH
INDULGENCE THIS EFFORT TO FURTHER,
BY UNCONVENTIONAL METHOD, GEN-
ERAL INTEREST IN THE STUDY TO
WHICH HE HAS DEVOTED HIS LIFE.

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PREFACE

INCREASING interest in the wild flowers has led to a very general desire to recognize them, even on the part of those who undertake no systematic study of botany. This interest is furthered by the numerous excellent popular works which in their turn encourage the study of the standard authorities.

In these books the recognition of the individual specimen is facilitated, it is true, by the arrangement according to families, as in the works of Matthews and of Weed; by that according to soil, as in those of Creevey and Lounsberry; and still more, for the uninitiated, by that according to color, first introduced, I think, in Dana's "How to Know the Wild Flowers" and used also by Blanchan, by Reed, and to a certain extent by Lounsberry. The arrangement according to time of bloom, used by some of these authors, is also of material assistance. Even with these aids, however, the search is often prolonged and baffling to one who has not mastered botanical analysis; and time may well be saved in the identification of a flower, to be advantageously spent upon these books in the study of its habits and history, its method of fertilization, and its place in verse and prose.

The Guide has been prepared with this need in view. The plan adopted will render it comparatively easy for the learner, the amateur, or any person of ordinary intelligence to identify a large number of the common wild flowers and fruits, especially those of definite color and other marked characteristics.

To this end charts for each color have been so arranged that a given specimen may be traced, through

successive divisions, to the group in which it will be found. For this search no special study or training is required beyond learning the directions, particularly learning to observe the form and arrangement of the leaves and flowers as they are there described.

Peculiarities of the plants, flowers, and fruits obvious to the non-botanist, but fairly constant, have been selected, and botanical terms, except such as are absolutely essential, have been avoided and replaced by words in common use.

This book is intended to supplement, not in any way to compete with or to replace, other treatises on the wild flowers. Among authorities other than those already mentioned aid has been sought from the works of Willkomm, of Emerson, and of Sargent, particularly for facts and figures, from the botanies of Gray, and of Britton and Brown. I have adhered to the families and the Latin names of Gray. For other Latin names and for a different classification, Britton and Brown should be consulted, also Matthews' "Field Book."

The selection of fruits is limited to a certain number attracting notice either on account of their general distribution or their conspicuous appearance. In this branch Peterson's "How to Know the Wild Fruits" has been of especial assistance.

I am under great obligation to my friend, Mr. Arthur F. Benson, for suggesting the chart system in place of the more cumbersome plan I had previously adopted, and for arranging the charts for publication.

The pen and ink illustrations I have made from fresh specimens and from examples in the Gray Herbarium, through the courtesy of Dr. Goodale.

GEORGE L. WALTON.

BOSTON, 1909.

CONTENTS

	PAGE
PREFACE.....	7
DEFINITIONS.....	15
DIRECTIONS.....	19

PART I.

GUIDE TO FLOWERS

Yellow or Yellowish.....	29
White or Whitish.....	59
Green or Greenish.....	101
Red.....	107
Pink and Rose-colored.....	113
Lavender to Purple.....	135
Blue.....	149
Brownish and Variegated.....	161

PART II.

GUIDE TO FRUITS

Red.....	165
White or Whitish.....	175
Blue.....	179
Black.....	185
Purple.....	193
Green, Greenish or Yellowish.....	197
Speckled.....	198

INDEX.....	199
------------	-----

LIST of ILLUSTRATIONS

Dioscorides *Frontispiece*

DESCRIPTIVE.

FIG.		PAGE
1.	Leaves opposite	19
2.	Leaves whorled	19
3.	Leaves from the root only	19
4.	Leaves otherwise (alternate)	19
5.	Leaves compound (yellow clover)	20
6.	Leaf compound (elder)	20
7.	Head	21
8.	Spike	21
9.	Raceme	21
10.	Umbel	21
11.	Diagram of a flower	22

FLOWERS.

12.	Elder (<i>Sambucus Canadensis</i>)	22
13.	Stick-tight (<i>Bidens frondosa</i>)	30
14.	Fly-honeysuckle (<i>Lonicera ciliata</i>)	32
15.	Cow-wheat (<i>Melampyrum Americanum</i>)	33
16.	Celandine (<i>Chelidonium majus</i>)	35
17.	Yellow clover (<i>Trifolium agrarium</i>)	37
18.	Agrimony leaf (<i>Agrimonia Eupatoria</i>)	39
19.	Common cinquefoil (<i>Potentilla Canadensis</i>)	40
20.	Golden ragwort (<i>Senecio aureus</i>)	45
21.	Evening primrose (<i>Oenothera biennis</i>)	48
22.	Bellwort (<i>Oakesia sessilifolia</i>)	48
23.	Small sundrops (<i>Oenothera pumila</i>)	49
24.	Heath-like hudsonia (<i>Hudsonia ericoides</i>)	51
25.	Hedge mustard (<i>Sisymbrium officinale</i>)	53
26.	Butter-and-eggs (<i>Linaria vulgaris</i>)	53
27.	Pale jewel-weed (<i>Impatiens pallida</i>)	54
28.	Water-horehound (<i>Lycopus sinuatus</i>)	57

29. Enchanter's nightshade (<i>Circaea Lutetiana</i>)	59
30. Bladder campion (<i>Silene Cucubalus</i>)	61
31. Hobble-bush (<i>Viburnum lantanoides</i>)	63
32. Pipe-wort (<i>Eriocaulon septangulare</i>)	68
33. Colic-root (<i>Aletris farinosa</i>)	69
34. Round-leaved sundew (<i>Drosera rotundifolia</i>)	71
35. One-flowered pyrola (<i>Moneses grandiflora</i>)	73
36. Twin-leaf (<i>Jeffersonia diphylla</i>)	74
37. Pine sap (<i>Monotropa Hypopitys</i>)	75
38. Great burnet (<i>Poterium Canadense</i>)	76
39. White sweet clover (<i>Melilotus alba</i>)	77
40. Yarrow (<i>Achillea Millefolium</i>)	80
41. Chamomile (<i>Anthemis Cotula</i>)	82
42. Climbing false buckwheat (<i>Polygonum scandens</i>)	83
43. Wild lily-of-the-valley (<i>Maianthemum Canadense</i>)	84
44. Devils-bit (<i>Chamaelirium Carolinianum</i>)	85
45. Leather-leaf (<i>Cassandra calyculata</i>)	87
46. Thorn-apple (<i>Datura Stramonium</i>)	87
47. <i>Cassiope hypnoides</i>	89
48. Water-pennywort (<i>Hydrocotyle Americana</i>)	90
49. Marsh andromeda (<i>Andromeda polifolia</i>)	93
50. Labrador tea (<i>Ledum latifolium</i>)	94
51. Silver-rod (<i>Solidago bicolor</i>)	96
52. Wild lettuce (<i>Lactuca Canadensis</i>)	96
53. Common everlasting (<i>Gnaphalium polycephalum</i>)	96
54. Bastard toad-flax (<i>Comandra umbellata</i>)	97
55. Oswego tea (<i>Monarda didyma</i>)	107
56. Hemp nettle (<i>Galeopsis Tetrahit</i>)	113
57. Twin-flower (<i>Linnaea borealis</i>)	115
58. Obedient-plant (<i>Physostegia Virginiana</i>)	117
59. Spreading dogbane (<i>Apocynum androsaemifolium</i>)	118
60. Seaside gerardia (<i>Gerardia maritima</i>)	119
61. Purple-leaved willow-herb (<i>Epilobium coloratum</i>)	120
62. Joe Pye weed (<i>Eupatorium purpureum</i>)	122
63. Tick-trefoil (<i>Desmodium nudiflorum</i>)	127
64. Rabbit-foot clover (<i>Trifolium arvense</i>)	129
65. Arethusa (<i>Arethusa bulbosa</i>)	130
66. Adder's mouth (<i>Pogonia ophioglossoides</i>)	131
67. Blue vervain (<i>Verbena hastata</i>)	136
68. Self-heal (<i>Brunella vulgaris</i>)	137

LIST OF ILLUSTRATIONS

69. Blue curls (*Trichostema dichotomum*)..... 139
 70. Wild geranium (*Geranium maculatum*)..... 139
 71. One-flowered cancer-root (*Aphyllon uniflorum*)..... 142
 72. Marsh speedwell (*Veronica scutellata*)..... 149
 73. Blue vetch (*Vicia Cracca*)..... 153
 74. Blue-eyed grass (*Sisyrinchium angustifolium*)..... 154
 75. Chicory (*Cichorium Intybus*)..... 156
 76. Harebell (*Campanula rotundifolia*)..... 158

FRUITS.

77. Winterberry (*Ilex verticillata*)..... 166
 78. Feverwort (*Triosteum perfoliatum*)..... 166
 79. Jack-in-the-pulpit (*Arisaema triphyllum*)..... 168
 80. False Solomon's seal (*Smilacina racemosa*)..... 169
 81. Purple-flowering raspberry (*Rubus odoratus*)..... 171
 82. Bayberry (*Myrica cerifera*)..... 176
 83. Solomon's seal (*Polygonatum biflorum*)..... 180
 84. Virginia creeper (*Ampelopsis quinquefolia*)..... 185
 85. Involucered fly-honeysuckle (*Lonicera involucrata*)..... 187
 86. Black crowberry (*Empetrum nigrum*)..... 189

COLORED PLATES.

PLATE I.—1, Swamp milkweed (*Asclepias incarnata*);
 2, Queen Anne's lace (*Daucus Carota*); 3, Moth mullein
 (*Verbascum Blattaria*); 4, Oswego tea (*Monarda didyma*);
 5, Meadow beauty (*Rhexia Virginica*); 6, 7, 8, Pitcher-
 plant (*Sarracenia purpurca*)..... 98

PLATE II.—1-4, Ferns; 5, Fleur-de-lis (*Iris Germanica*);
 6, Southern blue flag (*Iris hexagona*); 7, Wood lily
 (*Lilium Philadelphicum*); 8, 9, Indian cucumber-root
 (*Medeola Virginiana*); 10, 11, Yellow lady's slipper
 (*Cypripedium pubescens*)..... 146

DEFINITIONS

Alternate leaves.—Arranged on the stem, or branch, otherwise than opposite or whorled.

Annual.—Lasting only one year.

Anther.—The pollen-bearing part of the stamen.

Axillary.—In the angle between a leaf, or branch, and the stem.

Berry.—A small, wholly fleshy fruit.

Bloom.—A waxy surface, as on the plum.

Bract.—A modified leaf.

Calyx.—The outer part of the floral envelope, made up of sepals, separate or joined together, generally green (see illustration in "Directions").

Cleft.—Cut about half way.

Cluster.—An assemblage, or bunch, of flowers or leaves (the term is not applied to the spike, raceme, head, or definite umbel, but includes corymbs, cymes, panicles, and compound racemes).

Composite.—The name of a large family in which apparently single flowers are made up of many florets. The central ones (usually tubular) may form a disk, the outer forming rays, as in the daisy, or all may be strap-shaped, as in the dandelion, or all may be tubular.

Compound leaf.—A leaf made up of leaflets (see illustration in "Directions").

Corolla.—The inner part of the floral envelope, made up of petals, separate or joined together. It is generally the part which gives the flower its color (see illustration in "Directions").

Corymb.—A flat or convex cluster with the outer flowers blossoming first.

Cyme.—A cluster with the inner flowers blossoming first.

Disk.—The centre of a composite flower-head.

Dissected.—Finely cut up (see illustration of Yarrow, White 38).

Divided.—With lobes reaching to the base.

Drupe.—A fleshy fruit with stony centre, as the cherry.

Filament.—The part of the stamen bearing the anther.

Flower-head.—A collection of florets joined into an apparently single flower, as in the Composite family.

Head.—A thick, close cluster of flowers practically, or quite, without separate stalks, as in the clover.

Herb.—A plant without lasting woody stem.

Involucre.—A whorl of modified leaves (bracts) around a flower.

Lance-shaped.—Long-pointed, with widest part nearer the base.

- Lateral*.—Growing on the side of the stem, or branch, as opposed to terminal.
- Leaflet*.—One of the parts making up a compound leaf.
- Lobe*.—A projection (as of the edge of a leaf, or of the corolla).
- Lyre-shaped*.—Pinnately cut with large lobe at end.
- Oblong*.—Of greater length than width, and with more or less parallel sides.
- Opposite leaves*.—Arranged in pairs on the stem, or branch (see illustration in "Directions").
- Oval*.—Broadly elliptical.
- Palmate*.—With divisions radiating out from the centre, as in the horse-chestnut leaf.
- Panicle*.—A loose compound cluster with flowers on individual stalks.
- Papilionaceous*.—With the formation of the Pulse family flowers, as the pea blossom, with standard, wings, and keel.
- Parted*.—Deeply cleft, but not quite divided.
- Pedicel*.—The stalk of a separate flower in a cluster.
- Peduncle*.—The main stalk which supports a solitary flower or collection of flowers.
- Perennial*.—Lasting from year to year.
- Perianth*.—The floral envelope, including calyx and corolla.
- Petiole*.—The stalk of a leaf.
- Pinnate*.—Arranged as in a feather.
- Pistil*.—The part of the flower which bears the seeds. The pistil includes the ovary, the style, and the stigma, but the name is commonly applied to the visible portion (see illustration in "Directions").
- Pome*.—A fruit like the apple.
- Raceme*.—An arrangement in which the flowers succeed each other on a single stalk, each flower having a stalk of its own (see illustration in "Directions").
- Ray-flowers*.—The flowers at the margin of a composite flower-head, when they are distinct from the disk.
- Scape*.—A leafless peduncle growing from the ground.
- Sepals*.—The divisions of the calyx (see illustration in "Directions").
- Sessile*.—Growing directly on the stem or the branch.
- Shrub*.—A woody plant, not as large as a tree.
- Spadix*.—A spike with a fleshy centre, as in "Jack-in-the-Pulpit."
- Spathe*.—A large bract enveloping the flower, like the "hood" of "Jack-in-the-Pulpit."
- Spike*.—An arrangement in which the flowers succeed each other on a single stalk, having no separate stalks of their own, but growing directly upon the main stalk (see illustration in "Directions").
- Stamens*.—The organs which bear the pollen (see illustration in "Directions").

Stem.—The main support of the plant. Upon the stem are borne the branches, if any.

Stigma.—The end of the pistil.

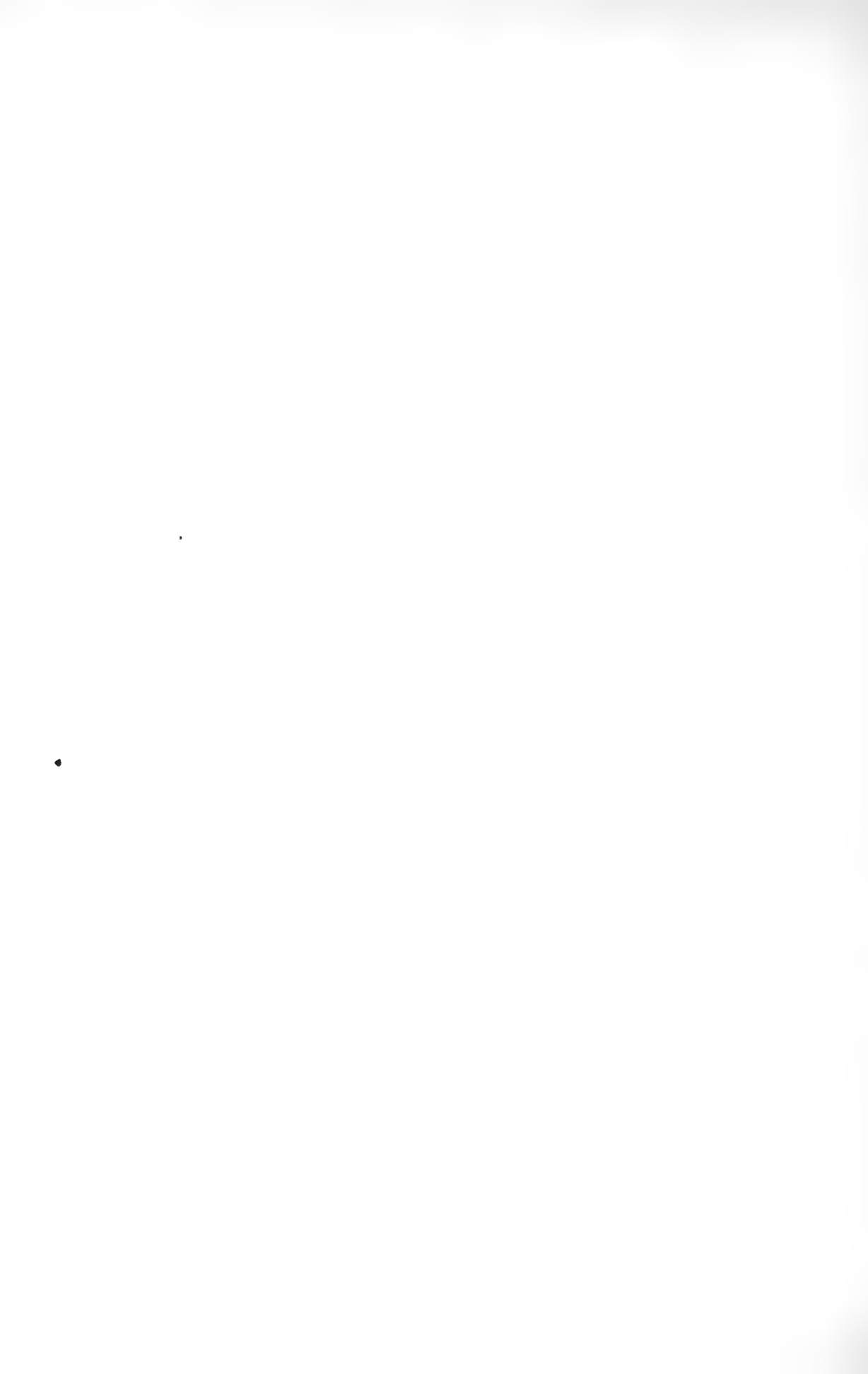
Stipule.—An appendage at the base of a leaf-stalk.

Style.—The part of the pistil connecting stigma and ovary.

Terminal.—At the end of the stem or branch, as opposed to lateral.

Umbel.—A cluster of flowers, or fruits, borne upon stalks which start from the same point (see illustration in "Directions").

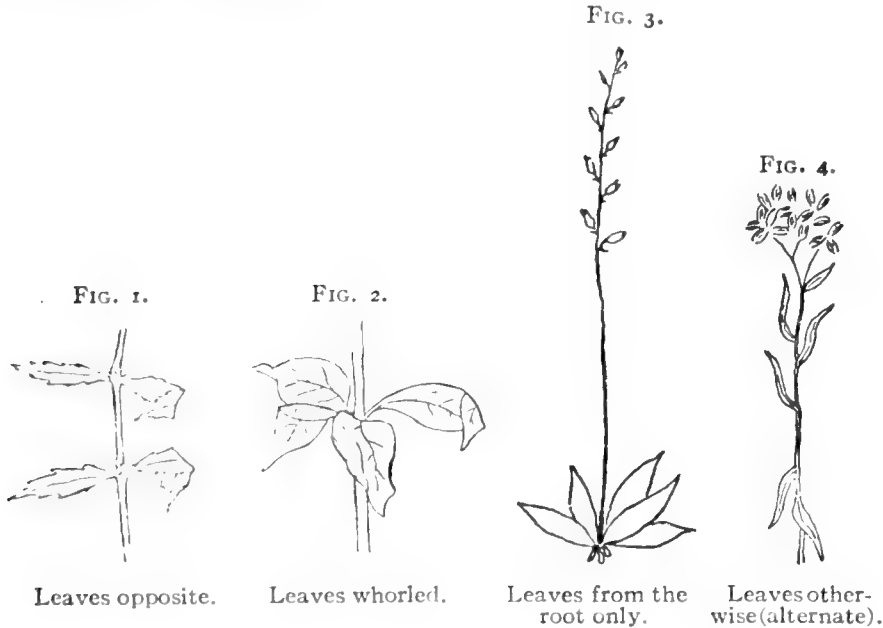
Whorled.—Arranged in a circle around the stem or branch.



DIRECTIONS

(To be carefully studied before using the charts)

The special feature of the book is the use of charts through which any specimen not recognized may be traced, by its obvious characteristics, to a small group. In this group it will be found if it is one of the number included (flowers about 400, fruits about 100). In the group, each specimen is sufficiently described to distinguish it from the others in the group.



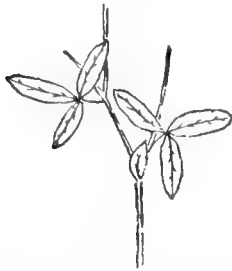
The characteristics chosen for the charts are in general (1) the kind of plant, whether a shrub or an herb, (2) its size, (3) the grouping of its leaves, (4) the grouping of the flowers, and (5) the shape of the flower. With these features, therefore, one must be familiar; thus, he must know the following facts:

A *shrub* is a woody plant smaller than a tree.

An *herb* is a plant with a soft stem dying down every year.

Leaves are *opposite* (Fig. 1), *whorled* (more than two springing from the same level on the stem (Fig. 2), *from the root only* (Fig. 3), or *otherwise*, generally *alternate* (Fig. 4). The leaf may have a stalk of its own, or it may grow directly on the stem or the branch; in the latter event it may, at its base, envelop or *clasp* the stem or the branch. The technical terms for these conditions are avoided, but will be found in the *Definitions*.

FIG. 5.



Leaves compound (yellow clover).

FIG. 6.



Leaf compound (elder).

Leaves are *compound* or *simple*. A compound leaf is one made up of leaflets, as in the clovers, or the elder (Figs. 5, 6). A simple leaf has no leaflets.

Flowers are either *solitary* (or few together), or are arranged in *head*, *spike*, *raceme*, *umbel*, or *clustered* without definite shape. In a *head* (Fig. 7) the flowers are very closely clustered, as in the clover.

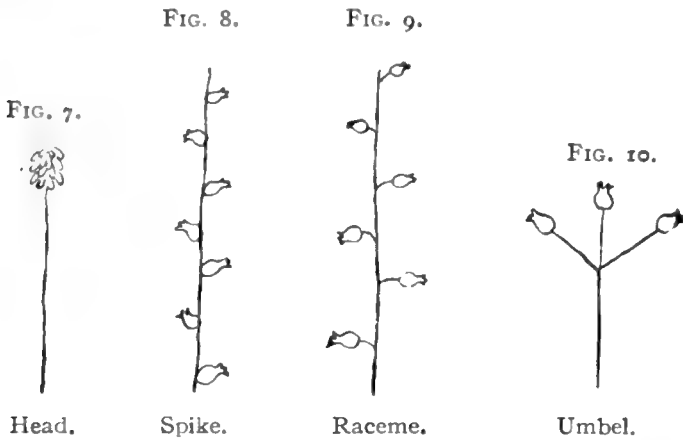
In a *spike* (Fig. 8) the flowers are arranged along a single stem, branch, or stalk, each flower growing directly from that "axis" without a separate flower-stalk.

In a *raceme* (Fig. 9) the flowers are likewise arranged along a single stem or branch, but each flower has a separate stalk of its own.

In the *umbel* (Fig. 10) the flower-stalks start from a common point. For popular use the umbel is not always carefully distinguished from other clusters and

many umbellate clusters will be found under the general head, *cluster*, for example, marsh andromeda, bastard toadflax, and spurge.

The *composite family* has many small flowers grouped closely into one apparently single flower, as the dandelion, daisy, and thistle. These apparently single flowers are called "flower-heads." The separate flowers making up this flower-head may be tubular, as in the disk, or centre, or their corollas may appear like single petals (*rays*).



A *papilionaceous* flower is one bearing a certain resemblance to a butterfly, as the blossom of the pea or bean.

The *calyx* is the cup-like part which holds the rest of the flower; it may be made up of separate *sepals* or otherwise formed, but it is generally green.

The *corolla* is the part of a flower which generally gives it color; it may be made up of separate *petals* or may be tubular, bell-shaped, or otherwise.

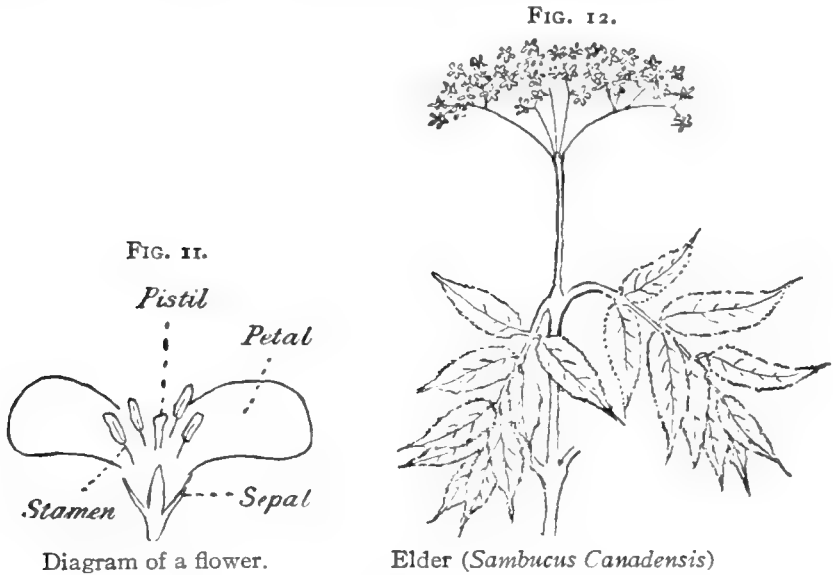
The *pistil* generally arises from the centre of the flower, and is surrounded by the *stamens* (Fig. 11).

Other botanical terms are replaced by using a common equivalent, for example, leaf-stalk for petiole, flower-stalk for pedicel, and the like.

Equipped with this much familiarity with botanical terms, one first notes the color of the flower, or apparent

flower. If it is doubtful under which color the flower falls it may be sought in one, and if not found there, in the other. It will sometimes be found in both.

Example.—Suppose we find, but cannot identify, the common elder. We first observe that the flower is white, and we turn to the white chart on page 56.



We first note under which of the general divisions the plant falls. These general divisions are found on the first page of the chart, thus:

- I. Leaves opposite.
- II. Leaves whorled.
- III. Leaves otherwise.

We observe that the leaves are opposite. We therefore start with Class I. The first division of Class I is into

- Stems 4-sided.
- Stems otherwise.

The stems of our specimen are round. We follow, then, the divisions of "Stems otherwise," namely:

- Trailing or climbing.
- Upright (A).

Following the "Upright" (A), we find

- Flowers in close head.
- Flowers in raceme.
- Flowers solitary or few
- Flowers in cluster.

The flowers of our specimen are in a cluster. We follow, therefore, this division, and find

- Herbs.
- Shrubs.

Our specimen is a shrub. Following the division "Shrub," we find

- Leaves lobed or compound (8).
- Leaves otherwise.

The leaves of our specimen are compound. The figure 8 shows that we have reached the group which contains our flower. Turning, therefore, to group 8, p. 62, we find four plants. We read the description of each *carefully* far enough to see if it corresponds with our specimen. Certain peculiarities are italicized to facilitate the search. The flowers in each group are also arranged in order of the time of blossoming.

The first specimen in group 8 is maple-leaved viburnum. Its leaves, we find, are somewhat 3-lobed, which causes us to discard this plant.

The next is the cranberry-tree, whose leaves are also 3-lobed; this therefore is also discarded.

The next is the elder, whose description we find corresponds in every particular with our plant.

In case there is doubt at any point which of the divisions we should follow, the fact is noted, and in case the plant is not found in one of the divisions we return to the point of doubt and follow the other.

The word *few* generally refers to not more than 3; the word *several* includes a larger number.

In general, unless *shrub* is indicated, the plant is an *herb*.

As the "Guide" is intended primarily for the general observer, a flower-head, whether of the Composite family or otherwise (as the bunchberry, or the flowering dogwood) is classed as a single flower, since it has that appearance; aggregations of leaves resembling flowers, and giving the distinctive color, as in the *painted cup*, are classed among the flowers.

Classification by colors implies some latitude; the general color-effect determines the placing of the flower; in case of doubt between purple and pink, the first choice falls to purple.

PART I.
GUIDE TO THE FLOWERS

IMPORTANT NOTICE BEFORE USING THE CHARTS.

1. Leaves growing *from the root* are not classed as either opposite or whorled, but are included under *otherwise* than opposite or whorled.

2. "Flowers solitary" does not necessarily mean that there is only one flower on the plant. It means that each flower is separately placed. Similarly "few," and "one to three," refer to the number of flowers grouped together; there may be many such groups on the plant.

3. A "flower-head" of the Composite family, as the dandelion or daisy, is classed as a single flower.

YELLOW OR YELLOWISH FLOWERS



FLOWERS

When a number in parentheses is reached, this number indicates the group desired)

fl. in spike or raceme (2)
 fl. in cluster (3)
 fl. otherwise (4)

fl. in umbel (8)
 otherwise (B)

plants with thorns (15)
 plants without thorns (C)

leaves finely dissected (9)
 3 leaflets— fl. not in raceme (10)
 fl. in raceme (11)

other than 3— fl. not with 5 petals (12) over 7 leaflets (13)
 fl. with 5 petals not over 7 (14)

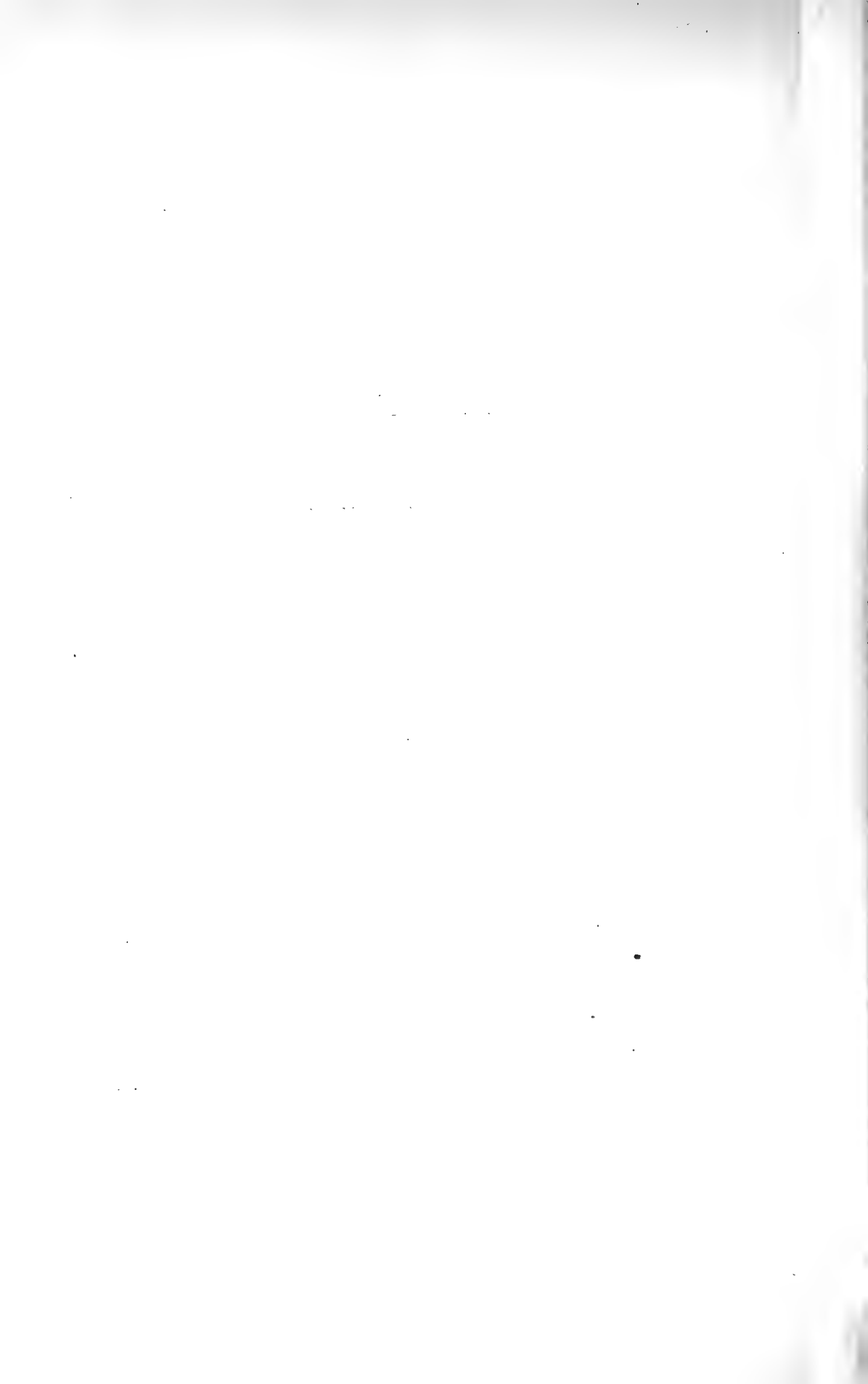
water plants (17)
 land plants (18)

stem angled (nearly smooth) (19)
 stem silky or hairy (20) leaves clasping or partly so (21)
 stem otherwise leaves not clasping (22)

fl. in spike (23) fl. violet-shaped (24)
 fl. solitary or few— fl. bell-shaped (25)
 fl. otherwise 4 petals (26)
 otherwise (27)

fl. in raceme— 4 petals (28)
 otherwise (29)

fl. in cluster— shrub (30)
 herb (31)



PRACTICAL GUIDE
TO THE
WILD FLOWERS & FRUITS

YELLOW OR YELLOWISH FLOWERS

I. LEAVES OPPOSITE.

1. Leaves opposite, flowers composite.

WILD SUNFLOWER (*Helianthus divaricatus*). Composite family.

Ht. 1 to several ft.; flower-heads 8-10 rays, rays 1 in. long; leaves egg-lance-shaped, *without stalks*. Woods. Summer.

SMALLER BUR MARIGOLD (*Bidens cernua*). Composite family.

Ht. few in. to 3 ft.; nearly smooth; small heads of yellowish tubular flowers, nodding, with or without yellow rays; leaves lance-shaped, unevenly toothed. Wet places. Summer.

STICK-TIGHT. BUR MARIGOLD (*Bidens frondosa*). Composite family.

Ht. 1 to several ft.; yellowish tubular flowers in small head *surrounded apparently by green leaves* (involucre); *leaves 3- to 5-divided*; leaflets broadly lance-shaped, coarsely toothed. Wet places. Summer and autumn.

LARGER BUR MARIGOLD (*Bidens chrysanthemoides*). Composite family.

Ht. 1-2 ft.; head somewhat nodding; large rays yellow (1 in.); *leaves simple*, lance-shaped, toothed, *without stalks*. Swamps. Late summer and autumn.

FIG. 13.



Stick-tight (*Bidens frondosa*).

2. Leaves opposite, flowers simple, in spike or raceme.

YELLOW LOOSESTRIFE (*Lysimachia stricta*). Primrose family.

Max. ht. 2 ft.; flowers small with *reddish centre*, on *long slender stalks* in long terminal racemes; corolla 5-parted, lobes pointed; leaves narrowly lance-shaped. Low ground. Summer.

SMOOTH FALSE FOXGLOVE (*Gerardia quercifolia*). Figwort family.

Ht. few feet; corolla long, tubular, with 5 unequal lobes; lower leaves commonly *deeply cut*, the upper oblong, pointed, cut or with smooth edges. Rich woods. Summer.

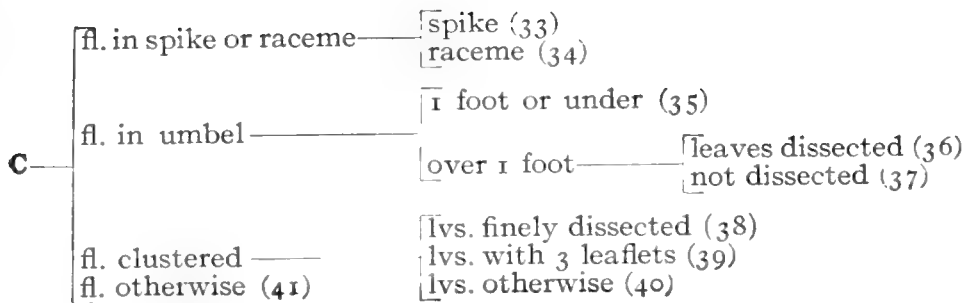
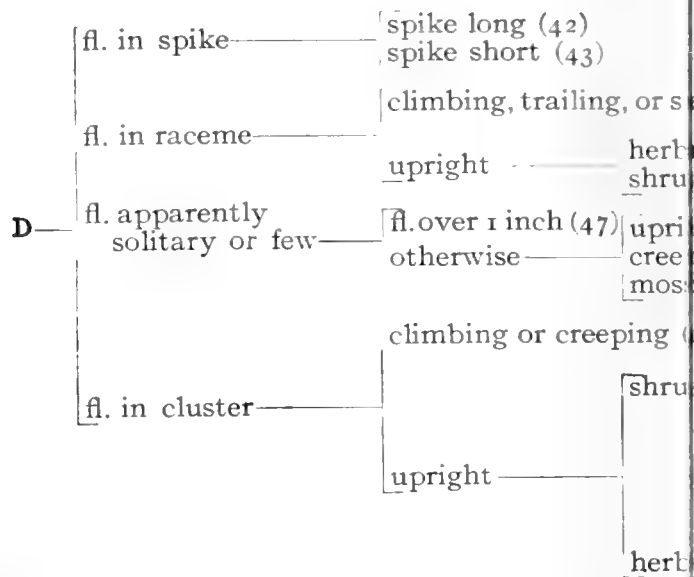
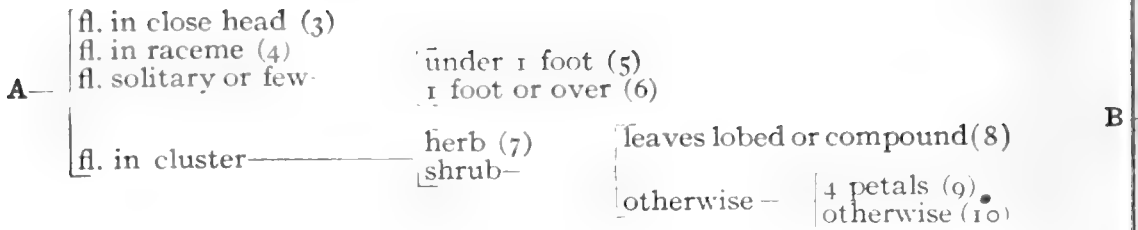
DOWNY FALSE FOXGLOVE (*Gerardia flava*). Figwort family.

Max. ht. 4 ft.; similar to above but *downy*, flowers *smaller* and leaves *less cut*. Open woods.

WHITE OR WHITISH FLOWERS

(First, see whether plant falls in Class I, II, or III; then follow out to right. When a number in parentheses is reached, this number indicates the group desired.)

<p>I. Leaves opposite</p>	<p>stem 4-sided (1) stem otherwise</p>	<p>climbing or trailing (2) upright (A, next page)</p>
	<p>fls. few (11) solitary</p>	<p>3 petals (12) apparently 4 (13) otherwise (15)</p>
<p>II. Leaves whorled</p>	<p>fl. in umbel (16) fl. in cluster fl. in spike (19)</p>	<p>2 feet or over (17) under 2 feet (18)</p>
<p>III. Otherwise</p>	<p>fls. from root only or under water without leaves (32) otherwise</p>	<p>water plant (20) land plant (B, next page)</p> <p>leaves compound or finely dissected (C, next page) leaves simple (D, next page)</p>



fl. in spike (21)	over 1 foot (22) 1 foot or under	lvs. compound (24)
fl. in raceme		lvs. simple lvs. evergreen (Pyrola) (25) otherwise (23)
fls. apparently solitary or few-	5 petals-	fl. violet-shaped (27) fl. otherwise (28)
fl. in cluster (26)	otherwise-	in mud (29)
fl. in umbel (31)		in other soil (30)

ading (44)

under 4 feet (45)
and tall herbs (46)

(48)
g or spreading (49)
ke (50)

over 5 feet high	with thorns (52)	fl. bell- or urn-shaped (53) fl. otherwise (54)
	without thorns	
not over 5 feet	fl. bell- or urn-shaped (55) otherwise (56)	
fl. Composite fam.	white rays (57)	
	otherwise (58)	
fl. not Composite fam.	fl. bell- or urn-shaped (59)	
	fl. 4 petals (60)	
	fl. apparently 5 petals (61)	
	fl. otherwise (62)	



FERN-LEAVED FALSE FOXGLOVE (*Gerardia pedicularia*).

Figwort family.

Similar to above but leaves *much cut*; stems slightly hairy.

See also HORSE-BALM (3).

3. Leaves opposite, flowers simple, in cluster.

ST. JOHN'S WORT (*Hypericum perforatum*). St. John's wort family.

Low plant; flowers *nearly 1 in. broad*, numerous, with many leaves; sepals 5, petals (5) elongated; stamens numerous; *leaves small*, oblong, without stalks. Waste places. Early summer.

SMALL-FLOWERED ST. JOHN'S WORT (*Hypericum mutilum*). St. John's wort family.

Similar but smaller, and with *much smaller flowers*.

GREAT ST. JOHN'S WORT (*Hypericum Ascyron*). St. John's wort family.

Max. ht. 5 ft.; *flowers large*, sepals and petals 5; leaves *long, often clasping*.

CANADIAN ST. JOHN'S WORT. (*Hypericum Canadense*). St. John's wort family.

Max. ht. 2 ft.; flowers small, petals 5, pods dark red, larger than flower; leaves *linear*. Sandy ground. Summer.

HORSE-BALM (*Collinsonia Canadensis*). Mint family.

Ht. few ft.; flowers scented; flowers on slender stalks in terminal clusters (panicked racemes), corolla 2-lobed; leaves toothed, pointed, with stalks. Rich woods. Summer.

4. Leaves opposite, flowers simple, not in spike, raceme, or cluster, plant over 1½ ft.

FLY-HONEYSUCKLE (*Lonicera ciliata*). Honeysuckle family.

Shrub, av. ht. 4 ft.; flowers *in pairs* in axils on slender stalks; corolla tubular, with 5 lobes, leaves rather blunt pointed, oblong-egg-shaped, with stalks. Woods. Spring.

BUSH HONEYSUCKLE (*Diervilla trifida*). Honeysuckle family.

Shrub, av. ht. 3 ft.; flowers generally in 3's in axils (and terminal); corolla tubular, with 5 lobes; leaves rather sharply pointed, egg-shaped, toothed. Rocks. Early summer.

FIG. 14.



Fly-honeysuckle (*Lonicera ciliata*).

FRINGED LOOSESTRIFE (*Steironema ciliatum*). Primrose family.

Ht. $1\frac{1}{2}$ ft. or over; flowers (several) on delicate stalks, axillary; calyx and corolla 5-cleft, with red centre; leaves broadly lance-shaped, sharp pointed, rounded at base, with long fringed stalk. Low ground. Summer.

5. Leaves opposite, flowers simple, not in spike, raceme, or cluster, not over $1\frac{1}{2}$ ft., petals 5.

ROCK-ROSE (*Helianthemum Canadense*). Rock-rose family.

Low plant; flowers (1 in.) solitary, terminal (later smaller and axillary, usually without petals); 5 sepals; 5 petals; leaves lance-shaped. Dry ground. Early summer.

ORANGE-GRASS (*Hypericum nudicaule*). St. John's wort family.

Ht. few in. to $1\frac{1}{2}$ ft.; flowers without stalks on slender branches; sepals 5, petals 5; leaves tiny, *close to stem*. Sandy soil. Early summer and autumn.

See also YELLOW WOOD SORREL (10).

See also MONEYWORT (6).

6. Same as 5, but not with 5 petals.

COW-WHEAT (*Melampyrum Americanum*). Figwort family.

Ht. generally under a foot; flowers small, pale yellow, solitary, axillary, calyx bell-shaped, corolla of 2 lips; leaves lance-shaped, short-stalked. Open woods. Early summer.

FIG. 15.



Cow-wheat (*Melampyrum Americanum*).

ST. ANDREW'S CROSS (*Ascyrum Crux-Andraeae*). St. John's wort family.

Low plant; flowers ($\frac{1}{2}$ – $\frac{3}{4}$ in.) axillary and terminal; sepals 4, in pairs; *petals* 4, narrow; leaves *narrow, inversely egg-shaped to oblong*, narrowing to base. Summer. New Jersey, South and West.

HEDGE HYSSOP (*Gratiola Virginiana*). Figwort family.
Ht. few in.—1 ft.; flowers under $\frac{1}{2}$ in.; solitary in axils on stalks; *corolla 2-lipped*, lower lip 3-cleft; leaves generally toothed, long and pointed at both ends, without stalks. Damp ground. All summer.

MONEYWORT (*Lysimachia nummularia*). Primrose family.
Trailing; flowers solitary, axillary, 1 in. broad or under; lobes of corolla 5, rounded; leaves oval, short-stalked. Damp ground. Early summer.

II. LEAVES WHORLED.

7. Leaves whorled.

INDIAN CUCUMBER-ROOT (*Medeola Virginiana*). Lily family.
Ht. abt. 2 ft.; stem erect, from horizontal white root; flowers in umbel at end of stem; sepals 3, *petals 3*; leaves in *two whorls*, lower 5–9 inversely egg-lance-shaped, pointed, without stalks; upper of 3 (occasionally more), egg-shaped. Rich woods. Early summer. (See Colored Plate II).

FOUR-LEAVED LOOSESTRIFE (*Lysimachia quadrifolia*). Primrose family.
Max. ht. 2 ft.; flowers *small* on long stalks from axils; *lobes (5) of corolla pointed*; leaves whorled in 4's or 5's (also 2's, 3's, and 6's occasionally somewhat alternate), egg-shaped-lance-shaped, pointed, without stems. Open woods and side of road. Early summer.

MEADOW LILY (*Lilium Canadense*). Lily family.
Ht. 2 – several ft.; flowers *large*, long stalked, nodding, *bell-shaped*, with 6 spreading points, with brown spots; leaves lance-shaped with stalks. Meadows and bogs. Early summer.

III. LEAVES NOT OPPOSITE OR WHORLED.

8. Leaves (not opposite or whorled) compound or finely dissected, flowers in umbel.

WILD PARSNIP (*Pastinaca sativa*). Parsley family.

Ht. 2 to several ft.; flowers small, in many umbels; leaflets rather broad, blunt pointed, toothed, without stalks. Common. Early summer to autumn.

Fig. 16.



Celandine (*Chelidonium majus*).

CELANDINE (*Chelidonium majus*). Poppy family.

Ht. 1-2 ft.; stem containing colored juice; flowers small; sepals 2, petals 4; leaves pinnately divided, leaflets irregularly toothed. Waste places about houses. Spring, summer.

See also CROWTOE (10).

9. Leaves (not opposite or whorled) finely dissected, flowers not in umbel.

GOLDEN CORYDALIS (*Corydalis aurea*). Fumitory family.

Ht. $\frac{1}{2}$ -1 ft.; delicate herb; flowers in *panicled racemes*; sepals 2; corolla yellow and pink, spurred; leaves dissected. Rocky places. Spring, summer.

TANSY (*Tanacetum vulgare*). Composite family.

Rather tall herb; smooth; flowers in *flat topped clusters* (dense corymbs); flower-heads small, disk-shaped, with many flowers, without rays, very small; leaves pinnately dissected. Roadsides. Summer.

BLADDERWORT (*Utricularia vulgaris*). Bladderwort family.

In water; several flowers at summit; calyx and corolla split, latter with spur; leaves finely dissected, with many bladders. Summer.

YELLOW WATER CROWFOOT (*Ranunculus multifidus*). Crowfoot family.

Flower like buttercup on long stalk rising from water (or mud), leaves generally under water and finely dissected, those rising from water sometimes with kidney-shaped leaflets. Early summer.

10. Leaves (not opposite or whorled) compound, 3 leaflets, flower not in raceme or umbel.

EARLY CROWFOOT (*Ranunculus septentrionalis*). Crowfoot family.

Low plant, somewhat hairy; flowers solitary or few; sepals 5; *petals* 5; leaflets generally with stalks, broad, *irregularly cut*. Moist places. Spring and summer.

YELLOW WOOD SORREL (*Oxalis stricta*). Geranium family.

Low plant, branching; flowers on stalks from axils; sepals 5, *petals* 5; leaflets inversely heart-shaped, drooping toward night. Spring, summer.

BULBOUS BUTTERCUP (*Ranunculus bulbosus*). Crowfoot family.

Av. ht. 1 ft., from bulb; stem hairy; flowers solitary, 1 in. across, 5 petals, 5 sepals *bent back*; leaf 3-divided, *each division again cut into rounded lobes*. Fields, etc. Spring, summer.

YELLOW CLOVER (*Trifolium agrarium*). Pulse family.
 Ht. 1 ft. or under; flowers papilionaceous, in small heads, on stalks; leaflets inversely egg-shaped to oblong, all from same point, finely toothed. Fields and sides of road. Summer.

Fig. 17.

Yellow clover (*Trifolium agrarium*).

CROWTOE. GROUND HONEYSUCKLE (*Lotus corniculatus*). Pulse family.

Bent at bottom or erect; ht. few in. to 2 ft.; flowers (few) in umbellate clusters, papilionaceous, yellow, $\frac{1}{2}$ –1 in. long; leaves of 3 leaflets, leaflets oblong—inversely egg-shaped, with short stalks. Waste ground. All summer.

11. Leaves (not opposite or whorled) compound, 3 leaflets, flowers in raceme.

YELLOW SWEET CLOVER (*Melilotus officinalis*). Pulse family.

Av. ht. 3 ft.; flowers small, papilionaceous, in long racemes; leaflets inversely egg-shaped—oblong, obtuse. Waste grounds. Summer.

WILD INDIGO (*Baptisia tinctoria*). Pulse family.

Ht. $1\frac{1}{2}$ –2 ft.; stems delicate; flowers papilionaceous; *racemes short and open*, often leafy; leaves practically without stalks, leaflets rounded, pale. Dry soil. Early summer.

12. Leaves (not opposite or whorled) compound, other than three leaflets, flowers not with 5 petals.

GOAT'S RUE (*Tephrosia Virginiana*). Pulse family.

Max. ht. 2 ft.; upright leafy stem; flowers papilionaceous, large, in terminal clusters (or racemes), "greenish, cream-yellow standard, purplish-rose wings and curved keel of greenish-yellow tinged with rose," Blanchan; leaves from 17–29 linear-oblong leaflets (Gray). Sandy ground, early summer. Southern New England, West and South.

CONE-FLOWER (*Rudbeckia laciniata*). Composite family.

Ht. several ft.; stem not hairy; flowers composite on long-stalked heads at ends of branches, disk prominent, rays inversely lance-shaped ($1\frac{1}{2}$ in. long), *drooping; upper leaves irregularly parted with lobes egg-shaped and pointed, or the top ones not divided*; lower leaves with *cut leaflets*. Thickets. Summer.

13. Leaves (not opposite or whorled) compound, over 7 leaflets, flower with 5 petals.

SILVER-WEED (*Potentilla Anserina*). Rose family.

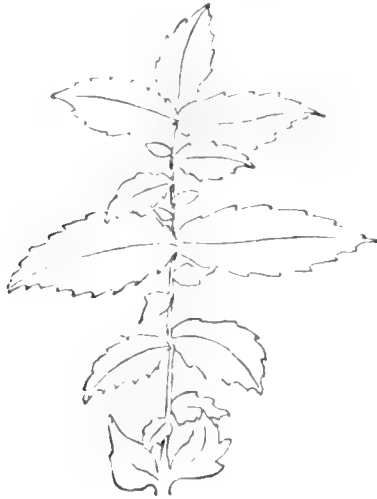
Extending by runners; flower-stalks *in axils*, long, bearing *single flower*; flowers about $\frac{3}{4}$ in. broad; calyx 5-lobed, petals inversely heart-shaped; leaves from root only; leaflets with 10 to 20 or more leaflets, oval, toothed, silky underneath. Meadows, etc. Spring, summer.

AGRIMONY (*Agrimonia Eupatoria*). Rose family.

Ht. abt. $1\frac{1}{2}$ ft.; flowers small in *long slender racemes*; top of calyx shaped like a top; petals 5; leaflets

about 6, large with very small leaflets of different sizes interspersed, more or less inversely egg-shaped and coarsely toothed. Edge of woods. Common. Summer.

Fig. 18.



Agrimony leaf (*Agrimonia Eupatoria*).

WILD SENNA (*Cassia Marylandica*). Pulse family.

Ht. few ft.; flowers in *short racemes* in axils; leaflets 6-8 pairs, lance-shaped to oblong, large. Swamps. Summer.

PARTRIDGE-PEA (*Cassia Chamaecrista*). Pulse family.

Low plant; flowers very *large* on delicate stalks; petals unequal, often with purple spot; many pairs of leaflets, narrowly oblong. Sandy fields. Common Southward. Summer.

14. Leaves (not opposite or whorled) compound, leaflets not 3, and not over 7, flowers with 5 petals.

COMMON CINQUEFOIL (*Potentilla Canadensis*). Rose family.

Low plant with slender stem; flowers single, petals rounded; leaves palmately divided into 5 leaflets. Dry ground. Early spring, summer.

SHRUBBY CINQUEFOIL (*Potentilla fructiosa*). Rose family.

Max. ht. 4 ft.; stem with many branches; petals rounded; leaflets about 6, oblong to lance-shaped, not toothed. Wet ground. Early summer.

Fig. 19.



Common cinquefoil (*Potentilla Canadensis*).

SILVERY CINQUEFOIL (*Potentilla argentea*). Rose family.

Ht. 1 ft. or under, branching at top; many flowers resembling preceding; leaves of 5 leaflets, toothed at end, *white underneath*. Dry ground. Early summer.

YELLOW AVENS (*Geum strictum*). Rose family.

Av. ht. 3½ ft.; hairy; calyx bell-shaped; petals broad, inversely egg-shaped; root-leaves irregularly pinnate; leaflets wedge-shaped; leaflets of stem-leaves (3-5) egg-shaped to oblong, pointed. Meadows. Summer.

15. Leaves (not opposite or whorled) simple, plants with thorns.

BARBERRY (*Berberis vulgaris*). Barberry family.

Shrub with delicate spines; *petals* 6, inversely egg-shaped; leaves toothed. Roadsides, etc. Early summer.

PRICKLY PEAR. INDIAN FIG. (*Opuntia vulgaris*). Cactus family.

On ground, made up of *light* green joints, with small spines and tiny leaves, close to stem; flowers large, solitary; petals about 8. Sandy places, etc. Summer. Nantucket and South.

OPUNTIA RAFINESQUII. Cactus family.

Similar but *dark* green; leaves not quite so small, and sometimes larger spines; petals 10-12.

16. Leaves from root only, simple, flowers composite.

COLTSFOOT (*Tussilago Farfara*). Composite family.

Ht. few in.—1½ ft.; flower-heads solitary on *stems* with many scales; leaves long-stemmed, broad with pointed lobes and teeth, *woolly underneath*. Wet ground. Early spring.

CYNTHIA (*Krigia amplexicaulis*). Composite family.

Ht. 1-2 ft.; flowers resembling dandelions (1½ in.) on long-branching stalks; basal leaves 2-6 in. long, narrowly toothed or cut, or without teeth, on stalks with margins; a *single leaf on the stem, clasping*. Moist ground. Spring to autumn.

FALL DANDELION (*Leontodon autumnalis*). Composite family.

Ht. abt. 1 ft.; leafless stem slender, *dividing at top*; flower-heads like small dandelions; leaves deeply toothed or pinnately cut. Meadows and roadsides. Summer, autumn.

DANDELION (*Taraxacum Taraxacum*). Composite family.

Single hollow stem bearing one large flower-head of strap-shaped flowers; leaves long, irregularly cut. Open fields, etc.

RATTLESNAKE-WEED (*Hieracium venosum*). Composite family.

Av. ht. 2 ft.; leafless stem slender, dividing at top; flower-heads, in loose open cluster, like small dandelions; leaves almost without teeth *with purple marking*. Dry woods. Summer and autumn.

17. Leaves from root only, simple, flowers not composite, water plants.

GOLDEN-CLUB (*Orontium aquaticum*). Arum family.

Long flowerless stem ending in *spadix covered with minute flowers*; leaves without teeth. Ponds. Spring.

YELLOW NELUMBO (*Nelumbo lutea*). Water-lily family. Single flower with corolla and calyx like the water lily but yellow; *pistils sunken into a hollowed receptacle*; leaves large, floating. Scattered localities. Summer.

18. Leaves from root only, simple, flowers not composite, land plants.

DOG'S-TOOTH VIOLET. YELLOW ADDER'S-TONGUE (*Erythronium Americanum*). Lily family.

Ht. abt. 8 in.; flowers solitary, on long stalks; 6 *pointed sepals*, sometimes spotted near bottom; leaves lance-shaped. Rich soil. Early spring.

CLINTONIA BOREALIS. Lily family.

Leafless stem under 1 ft.; umbel of several bell-shaped flowers, yellowish; leaves large, oblong or egg-shaped. Woods. Spring and early summer.

YELLOW STAR-GRASS (*Hypoxis erecta*). Amaryllis family.

Ht. few in.; flowerless stem slender, bearing 1-4 flowers; perianth with 6 pointed divisions; *leaves linear*, long. Meadows and open woody places. Spring, autumn.

YELLOW-EYED GRASS (*Xyris flexuosa*). Mayaca family.
Ht. abt. 1 ft.; flowerless stem delicate; *flowers in small head*; sepals 3; *petals 3 with claws*; leaves linear, twisted. Bogs. Summer.

BLACKBERRY LILY (*Belamcanda Chinensis*). Iris family.
Ht. few ft.; flowers few at end of stem, 6-parted, "light golden orange color mottled with dull magenta spots" (Matthews); leaves long. Late summer. N. Y., South and West.

19. Leaves alternate, simple, plants without thorns, flowers composite, stem angled, nearly smooth.

SNEEZEWEED. SWAMP SUNFLOWER (*Helenium autumnale*). Composite family.
Max. ht. 6 ft.; rays drooping, wedge-shaped, with several notches in the end; disk globular, yellow; leaves mostly toothed, lance-shaped to egg-shaped. Banks and wet ground. Late summer and autumn.

20. Same as 19, but stems silky or hairy.

BLACK-EYED SUSAN (*Rudbeckia hirta*). Composite family.
Max. ht. 2 ft.; rays about 12, long, *disk brown, conical*; *leaves not toothed*, upper oblong or lance-shaped, *without stalks*, lower spoon-shaped, *with stalks*. Spring, summer.

ROUGH HAWKWEED (*Hieracium scabrum*). Composite family.
Low plant; stem rough, hairy, leafy; flower-heads *like small dandelions*; flower-stalks stout; *leaves inversely egg-shaped, nearly without teeth*, hairy. Dry woods. Summer.

GOLDEN ASTER (*Chrysopsis Mariana*). Composite family.
Ht. 1-2 ft.; stem silky; flower-heads in corymb, rather large; *leaves narrowly oblong, mostly toothed*. Dry ground. Late summer.

WILD SUNFLOWER (*Helianthus giganteus*). Composite family.

Max. ht. 10 ft.; stem hairy, stout; flower-heads large; *leaves* lance-shaped, pointed, *finely toothed or almost without teeth, nearly without stalks*. Wet places. Late summer.

CANADIAN GOLDEN-ROD (*Solidago Canadensis*). Composite family.

Ht. 3-6 ft.; stem hairy; *flower-heads small, in curving, one-sided, long racemes* forming terminal panicle; leaves lance-shaped, sharply toothed, without stalks, rough. Fields, etc. Late summer, autumn.

21. **Leaves alternate, simple, flowers composite, stem not angled, or silky or hairy, leaves clasping or nearly so.**

CANADA HAWKWEED (*Hieracium Canadense*). Composite family.

Ht. 1-several ft.; *flowers like small dandelions* in clusters (panicles) at top; leaves oblong or lance-shaped, pointed, toothed, somewhat clasping. Dry woods. Summer and early autumn.

YELLOW THISTLE (*Cnicus horridulus*). Composite family.

Ht. few ft.; stout; *head 1 in. broad*, flowers all tubular; leaves long, irregularly cut and toothed; lobes with prickles. Sandy places. Summer.

ELECAMPANE (*Inula Helenium*). Composite family.

Max. ht. 6 ft.; stems stout; rays numerous, *narrow*; flower-heads large; *leaves large, woolly on under surface*, those from root egg-shaped with stalks, others clasping stem. Roadsides and damp places. Late summer.

PRICKLY LETTUCE (*Lactuca Scariola*). Composite family.

Ht. several ft.; stout; flower-heads 6-12, small, in terminal and axillary racemes; leaves oblong, finely and sharply toothed; *prickles along mid-rib underneath*. Waste places. Late summer.

SEA-SIDE GOLDEN-ROD (*Solidago sempervirens*). Composite family.

Av. ht. 3-4 ft.; stout, generally simple stem, very leafy; flower-heads nearly $\frac{1}{2}$ in. long with conspicuous rays, in short, hairy racemes forming terminal panicle; leaves somewhat clasping, lance-shaped. Near coast. Late summer, autumn.

Fig. 20.



Golden ragwort (*Senecio aureus*).

22. Same as 21, but leaves not clasping.

GOLDEN RAGWORT (*Senecio aureus*). Composite family.
Av. ht. 2 ft.; flower-heads small on long stalks; leaves thin, those from root simple and round, or

heart-shaped on long stalks, lower stem-leaves pinnately divided with large lobe at end, upper lance-shaped, pinnately cut, without stalks or partly clasping. Fields. Common. Early summer.

WILD LETTUCE (*Lactuca Canadensis*). Composite family. Ht. several ft.; *involucre cylindrical*; heads yellowish, drooping in long clusters; lower leaves more or less lobed, all without teeth. Rich ground. Summer and autumn. (See illustration under White 57).

PANICLED HAWKWEED (*Hieracium paniculatum*). Composite family.

Low plant; *stem slender*; *flower-heads like minute dandelions, on slender stalks*; leaves lance-shaped, somewhat toothed. Open woods. Summer and early autumn.

LION'S-FOOT (*Prenanthes serpentaria*). Composite family. Ht. 2 ft.; flower-heads cream-color, resembling wild lettuce (see illustration, White 57), *involucre cylindrical*, purplish; flowers in long clusters; *lower leaves 3-lobed*. Roadsides, etc. Summer.

RUDBECKIA LACINIATA. Composite family.

Ht. several ft.; rays long and drooping, *disk cone-shaped*; leaves pointed, stalked, upper unevenly cut, lower of three or more irregular leaflets. Edges of swamps, etc. Summer.

EARLY GOLDEN-ROD (*Solidago juncea*). Composite family.

Max. ht. 4 ft.; stem rather stout, sometimes branching; flower-heads small in large terminal panicle; leaves smooth, broadly lance-shaped, sharply toothed, the *lower very large*, sometimes 1 ft. long. Dry ground. Early summer, autumn.

BLUE-STEMMED GOLDEN-ROD (*Solidago caesia*). Composite family.

Max. ht. 3 ft.; slender bluish stem covered with a bloom; flower-heads *small, clustered in axils*; leaves broadly lance-shaped, sharply toothed, without stalks. Woods. Late summer, autumn.

ELM-LEAVED GOLDEN-ROD (*Solidago ulmifolia*). Composite family.

Max. ht. 4 ft.; slender stems sometimes branching; flower-heads small in a racemose panicle at top of stem; leaves thin, toothed, somewhat resembling elm-leaves, with stalks. Woody places. Summer, autumn.

23. Leaves alternate, simple, plants without thorns, flowers (not composite) in spikes.

WOOD-RUSH (*Luzula campestris*). Rush family.

Ht. $\frac{1}{2}$ -1 ft.; flowers small, straw-colored, crowded into spike, *sepals* 6, sharp-pointed; leaves linear. Dry ground. Spring.

WOOD BETONY (*Pedicularis Canadensis*). Figwort family.

Ht. $\frac{1}{2}$ -1 ft.; *spikes* short and thick; corolla 2-lipped, upper lip with hood; leaves pinnately parted or cut. Banks and thickets. Spring, summer.

MULLEIN (*Verbascum Thapsus*). Figwort family.

Max. ht. 6 ft.; stem woolly; flowers in long thick spike, large; *corolla* of 5 lobes, wheel-shaped; leaves large, pointed. Fields. Summer.

SUNDROPS (*Oenothera fruticosa*). Evening Primrose family.

Max. ht. 3 ft., stout, hairy; flowers 1 in. or more across in loose spike; long tube of calyx with 4 pointed lobes, bent back; petals 4, inversely heart-shaped; leaves mostly toothed. Dry ground. Common. Summer.

EVENING PRIMROSE (*Oenothera biennis*). Evening Primrose family.

Ht. 2-several ft.; stout, erect, somewhat hairy; calyx very long with 4 pointed lobes; *petals* 4; leaves lance-shaped, pointed, lowest with stalks. Fields and roadsides. Summer and autumn.

BLACK HENBANE (*Hyoscyamus niger*). Nightshade family.
 Ht. 1-2 ft. or over; flowers large, urn-shaped, with edges 5-pointed, ill-scented, spiked above, below solitary; leaves large, unevenly lobed, generally clasping. Waste ground. All summer.
 See also POVERTY-GRASS (29).

Fig. 21.

Evening primrose (*Oenothera biennis*).

Fig. 22.

Bellwort (*Oakesia sessilifolia*).

24. Leaves alternate, simple, plants without thorns, flowers (not composite) solitary or few, violet-shaped.

DOWNY YELLOW VIOLET (*Viola pubescens*). Violet family.
 Low plant, hairy; leaves heart-shaped, pointed.
 Woods. Spring.

25. Same as 24, but flowers bell-shaped.

BELLWORT (*Oakesia sessilifolia*). Lily family.

Low plant; stem slender, 4-angled; one or two flowers terminal or opposite leaves, narrowly bell-shaped; leaves lance-shaped, acute at both ends, without stalks or clasping. Moist woods. Spring.

BELLWORT (*Uvularia perfoliata*). Lily family.

Similar but sometimes 20 in. high, flowers larger and leaves pierced by stem.

SOLOMON'S SEAL (*Polygonatum biflorum*). Lily family.
 Av. ht. 2 ft.; single stem; flowers on slender stalks, axillary; leaves egg-shaped—oblong, or lance-shaped, practically without stalks. Woods. Spring.

26. Leaves alternate, simple, plants without thorns, flowers (not composite) solitary or few, petals 4.

SEEDBOX (*Ludwigia alternifolia*). Loosestrife family.
 Ht. 2-3 ft.; flowers axillary, $\frac{1}{2}$ in. broad; petals 4; leaves from short stalk, lance-shaped. Swamps. All summer.

SMALL SUNDROPS (*Oenothera pumila*). Evening Primrose family.

Ht. generally under 1 ft.; erect; slender stem; flowers less than $\frac{1}{2}$ in. across, one or few near top; petals 4, notched at end; leaves narrowly oblong, narrowed at base. Dry ground. Early summer.

Fig. 23.



Small sundrops (*Oenothera pumila*).

CELANDINE POPPY. YELLOW POPPY (*Stylophorum diphyllum*). Poppy family.

Ht. 1-1 $\frac{1}{2}$ ft.; flowers few, terminal; petals 4, broad; leaves long, long-stalked, pinnately cut and divided, divisions inversely egg-shaped with rounded teeth or lobes. Woods. Early spring. Western Penn. and West.

27. Same as 24 but flowers neither violet- nor bell-shaped, nor with 4 petals.

LEATHER-WOOD (*Dirca palustris*). Mezereum family.

Max. ht. 6 ft.; shrub; flowers few, small, clustered in axils, appearing before leaves, small, funnel-form, 8 *protruding stamens*; leaves oval, not toothed. Wet woods. Spring.

PURSLANE (*Portulaca oleracea*). Purslane family.

Prostrate, much branched; flowers opening few hours in day; *petals* 5; *leaves* very *thick*, rounded at end. Wet places. Summer.

MARSH MARIGOLD (*Caltha palustris*). Crowfoot family.

Av. ht. 1½ ft.; stem hollow; sepals (5 or more) broad, inversely egg-shaped, petal-like; petals wanting; *leaves* broad, *heart-shaped* or *kidney-shaped*, edges wavy or with rounded teeth, or practically without teeth. Wet places. Spring.

YELLOW LADY'S SLIPPER (*Cypripedium pubescens*).

Orchis family.

Ht. 2 ft.; inflated lip 1½ in. long; flattened, *two long, brown, spirally twisted petals* at side; *leaves* broad, *pointed*. Damp places. Early summer. (See Colored Plate II).

BUTTERCUP (*Ranunculus acris*). Crowfoot family.

Ht. 2 ft. or over; generally hairy; flowers of 5 petals, each on end of long stalk; leaves deeply parted, the lobes deeply cut. Fields everywhere. Spring to autumn.

SMALL-FLOWERED CROWFOOT (*Ranunculus abortivus*).

Crowfoot family.

Ht. ½–2 ft.; flowers small, *petals* 5, light yellow; *lower leaves* somewhat *kidney-shaped*, *upper* deeply cut. Moist ground. Summer.

HEATH-LIKE HUDSONIA (*Hudsonia ericoides*). Rock-rose family.

Low shrub widely branching; flowers small; petals 5; leaves minute. Coast. Spring, early summer.

INDIAN MALLOW (*Abutilon Avicennae*). Mallow family.
Ht. several ft., stout; flowers few on stout peduncles; 5 broad petals; leaves *round-heart-shaped*, pointed, *on long stalks*, *velvety*. Waste ground. Summer.

RATTLEBOX (*Crotalaria sagittalis*). Pulse family.
Ht. *few in. to 1 ft.*; stem hairy; flowers few, small, papilionaceous; leaves oval-lance-shaped. Sandy ground. Summer.

Fig. 24.

Heath-like hudsonia (*Hudsonia ericoides*).

ASPARAGUS (*Asparagus officinalis*). Lily family.
A tall, bushy herb; flowers greenish-yellow, solitary in axils, on pointed stalks; *perianth 6-parted*; *apparent leaves thread-like*. An escape. Early summer.

28. Leaves alternate, simple, plants without thorns, flowers (not composite) in raceme, 4 petals.

YELLOW ROCKET (*Barbarea vulgaris*, var. *arcuata*). Mustard family.

Ht. 1-2 ft.; stems angled; flowers small, bright yellow; *Pods* long and *spreading*; lower leaves with stalks, pinnately cut, with large rounded terminal lobe and several pairs of small lateral ones; upper leaves without stalks. Roadsides and waste places. Common. Early spring, summer.

ERECT-FRUITED WINTERCRESS (*Barbarea vulgaris*, var. *erecta*). Mustard family.

Similar to above but with larger lateral leafy divisions and with *Pods erect and pressed against stem.*

YELLOW WATERCRESS (*Nasturtium palustre*). Mustard family.

Av. ht. 2 ft.; stem erect; flowers small; leaves *pinnately lobed*, or *upper lance-shaped*. Wet places. Early summer.

ALLEN'S SUNDROPS (*Oenothera humifusa* Alleni). Evening Primrose family.

Low perennial, *stems at first prostrate*; flowers in terminal racemes 1 or 2 in. long; petals notched; leaves inversely lance-shaped. Sandy ground. Summer. Eastern Long Island.

WILD RADISH (*Raphanus Raphanistrum*). Mustard family.

Tall weed; petals veined; leaves pinnately cut, with large terminal lobe, rough; pods like string of beads. Fields. Summer.

BLACK MUSTARD (*Brassica nigra*). Mustard family.

Ht. 2—several ft.; flowers small, few in blossom at once; lower leaves *lyre-shaped*. Waste fields. Summer and autumn.

WILD MUSTARD (*Brassica Sinapistrum*). Mustard family.

Max. ht. 2 ft.; sparingly hairy; flowers small; leaves irregularly toothed but *not deeply cut*, somewhat *egg-shaped*, blunt-pointed, lower with short flat stalks, upper practically without stalks.

HEDGE MUSTARD (*Sisymbrium officinale*). Mustard family.

Ht. 1—few feet.; flowers small, few in blossom at once; pods close to stem; leaves *pinnately cut with lobes turned backward*, lower with stalks. Waste ground. All summer and autumn.

29. Same as 28, but not with 4 petals.

WOAD-WAXEN (*Genista tinctoria*). Pulse family.

Max. ht. 2 ft.; flowers papilionaceous; leaves lance-shaped. Growing in masses on hillsides. Early summer.

BUTTER-AND-EGGS (*Linaria vulgaris*). Figwort family.

Ht. 1 ft. or over; flowers in dense raceme, with slender spurs, 2-lipped; leaves linear, numerous, without teeth. Waste places. Summer and autumn.

Fig. 25.

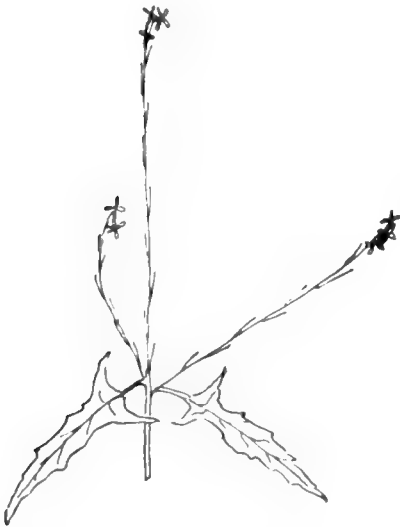
Hedge mustard (*Sisymbrium officinale*).

Fig. 26.

Butter-and-eggs (*Linaria vulgaris*).

POVERTY-GRASS (*Hudsonia tomentosa*). Rock-rose family.

Ht. under 1 ft.; heath-like; flowers numerous, small, with very short stalks; leaves minute, pressed together. Sandy shores. Early summer.

MOTH MULLEIN (*Verbascum Blattaria*). Figwort family.

Max. ht. 6 ft.; flowers in long, open raceme; corolla (1 inch) wheel-shaped, of 5 rounded lobes; leaves pointed, toothed, upper clasping. Early summer, autumn. (See Colored Plate I).

30. Shrubs, without thorns, leaves alternate, simple, flowers (not composite), in cluster.

SPICE-BUSH. FEVER-BUSH (*Lindera Benzoin*). Laurel fam.
Tall shrub; flowers small, almost without stalks in lateral umbel-like clusters composed of smaller clusters of 4-6 flowers; leaves oblong—inversely egg-shaped. Damp woods. Early spring.

WITCH HAZEL (*Hamamelis Virginiana*). Witch-hazel fam.
Tall shrub; flowers clustered along stem; calyx 4-parted; *petals* 4; linear; leaves oval. Autumn. Hillsides.

31. Herbs, otherwise same as 30.

SPOTTED JEWEL-WEED (*Impatiens fulva*). Geranium fam.
Ht. 2—several ft.; flower-clusters, open, in axils on long stalks or in panicles, *orange with brownish spots*; calyx and corolla of same color; sepals apparently 4, one in form of sac; *petals* 2, *unequal, 2-lobed*; leaves egg-shaped to oval, coarsely toothed, with stalks. Damp shady places. Common southward. Early summer.

Fig. 27.



Pale jewel-weed (*Impatiens pallida*).

PALE JEWEL-WEED (*Impatiens pallida*). Geranium family.
Similar to above but flowers pale-yellow, only slightly dotted; larger and greener than above and with larger flowers. Common northward. Summer.

WHITE OR WHITISH FLOWERS



WHITE OR WHITISH FLOWERS

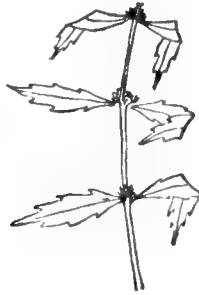
I. LEAVES OPPOSITE.

1. Leaves opposite, stem 4-sided.

WHITE VERVAIN (*Verbena urticaefolia*). Vervain family.
Ht. few ft.; flowers small *in long slim spikes*;
leaves with stalks, pointed, toothed. Waste places.
Early summer.

MOUNTAIN MINT (*Pycnanthemum lanceolatum*). Mint family.
Av. ht. 2 ft.; stem stiff and branching; flowers small *in terminal clusters*, white with purple dots; leaves very narrowly lance-shaped, without stalks, opposite. Fields. Summer.

Fig. 28.



Water-horehound (*Lycopus sinuatus*).

WATER-HOREHOUND (*Lycopus sinuatus*). Mint family.
Ht. 1 ft. or over; flowers small *in axillary whorls*;
leaves with short stalks, upper without stalks, all pointed, irregularly toothed; stem *acutely 4-angled* (Gray). Common. Wet places. Early summer-autumn.

BUGLE-WEED (*Lycopus Virginicus*). Mint family.

Ht. $\frac{1}{2}$ -2 ft.; flowers small in axillary whorls; leaves with stalks, toothed, acute at both ends; stem *obtusely 4-angled* (Gray).

See also MOTHERWORT (Purple 5).

2. Leaves opposite, stem not 4-sided, plant climbing or trailing.

PARTRIDGE-BERRY (*Mitchella repens*). Madder family.

Running, flowers in twos; calyx 4-toothed; *corolla funnel-form*, 4-lobed; leaves with stalks, egg-shaped, pointed, shining, evergreen. Dry woods. Early summer.

TRAVELLER'S JOY (*Clematis Virginiana*). Crowfoot family.

A climbing vine; 4 *spreading sepals resembling petals*; leaves of 3 leaflets. River banks. Summer,

3. Leaves opposite, stem not 4-sided, plant upright, flowers in close heads.

BUTTON-BUSH (*Cephalanthus occidentalis*). Madder family.

A rather tall shrub; flowers in spherical heads (diameter of 1 in.), on stalks; leaves oval, short-stalked, without teeth, opposite (or whorled in 3's). Near water. Early summer.

4. Leaves opposite, stem not 4-sided, plant upright, flowers in raceme.

MITREWORT (*Mitella diphylla*). Saxifrage family.

Ht. $\frac{1}{2}$ -1 ft.; hairy; flowers small in delicate raceme; petals 5; leaves heart-shaped, pointed, almost without stalks. Rich woods. Spring.

ENCHANTER'S NIGHTSHADE (*Circaea Lutetiana*). Evening Primrose family.

Ht. 1 ft. or over; flowers small; petals 2; leaves egg-shaped, slightly toothed; fruit bur-like. Cool woods. Summer.

5. Leaves opposite, stem not 4-sided, plant upright, flowers solitary or few, plant under 1 ft.

COMMON CHICKWEED (*Stellaria media*). Pink family.
Low plant with spreading stem; flowers terminal; sepals 4-5; petals 4-5, deeply 2-parted; leaves egg-shaped or oblong, lower with hairy stalks. Damp ground. All year.

Fig. 29.



Enchanter's nightshade (*Circaea Lutetiana*).

BROAD-LEAVED SANDWORT (*Arenaria lateriflora*). Pink family.

Low plant; smooth; flowers solitary or few, lateral and terminal; sepals 4-5; petals 4-5, 2-lobed; leaves obtusely pointed. Moist places. Spring, early summer.

FIELD CHICKWEED (*Cerastium arvense*). Pink family.

Low plant; stems ascending or erect, downy or nearly smooth, slender; petals 5, 2-lobed; leaves very narrow. Dry or rocky places. Spring, summer.

MOUNTAIN SANDWORT (*Arenaria Groenlandica*). Pink family.

Ht. few inches; flowers terminal; sepals 5; petals 5, notched; leaves linear. Top of mountains, riverbanks near sea. Early summer.

6. Leaves opposite, stem not 4-sided, plant upright, flowers solitary or few, plant 1 ft. or over.

FLOWERING DOGWOOD (*Cornus florida*). Dogwood family.

Shrub or small tree; *apparent* flower solitary with 4 large white rounded petals notched at end; real flowers small, greenish-yellow, enclosed in the white involucre; leaves broadly oval, pointed, stalked. Woods. Early spring.

NIGHT-FLOWERING CATCH-FLY (*Silene noctiflora*). Pink family.

Ht. 1–few ft.; flowers solitary or few clustered on long stalk, axillary or terminal; petals 5, deeply cleft at end; leaves lance-shaped, without stalks. Waste ground. Summer.

7. Leaves opposite, stem not 4-sided, plant upright, flowers in cluster, herb.

WHITE BEARD-TONGUE (*Pentstemon Digitalis*). Figwort family.

Ht. 1–5 ft; flowers rather large in terminal clusters (panicles), corolla tubular ending in 2 lips, of 2 and 3 lobes respectively; leaves broadly lance-shaped, toothed, generally with stalks. Dry ground. Spring, early summer. *New York, South and West.*

LONG-LEAVED STITCHWORT (*Stellaria longifolia*). Pink family.

Low plant; stem erect, generally smooth; flowers in cymes; sepals 4–5, petals 4–5, 2-parted; leaves linear. Grassy places. Early summer.

THOROUGHWORT. BONESET (*Eupatorium perfoliatum*). Composite family.

Ht. several ft.; stout; flowers small in large terminal clusters; leaves united round stem. Low grounds. Summer.

TURTLE-HEAD (*Chelone glabra*). Figwort family.

Ht. 1—several ft.; *flowers large, closely clustered at top, white or pinkish, nearly without stalks; corolla 2-lipped; leaves lance-shaped, pointed, short-stalked.* Wet places. Summer.

WHITE SNAKE-ROOT (*Eupatorium ageratoides*). Composite family.

Ht. 1—several ft.; *flowers small, tubular, in large clusters (compound corymbs); leaves broadly egg-shaped, pointed, coarsely toothed, long-stalked, thin (3-5 in. long).* Rich woods. Summer, autumn.

Fig. 30.



Bladder campion (*Silene Cucubalus*).

BLADDER CHAMPION (*Silene Cucubalus*). Pink family.

Ht. 1 ft. or more; *calyx inflated and veined; corolla of 5 petals, each cleft at end; leaves long, narrow and pointed.* Roadsides. Summer.

See also SPURGE (whose upper leaves are opposite or whorled) (61).

See also BOUNCING BET (Pink 8).

See also CRINKLE-ROOT (39).

8. Leaves opposite, stem not 4-sided, plant upright, flowers in clusters, shrub, leaves lobed or compound.

MAPLE-LEAVED VIBURNUM. DOCKMACKIE (*Viburnum acerifolium*). Honeysuckle family.

Ht. several ft., *straggly growth*; flowers in flat clusters (compound cymes); calyx 5-toothed; corolla 5-lobed; *leaves of 3 lobes*, lobes pointed, *irregularly toothed*; fruit a nearly black berry (drupe). Dry woods. Spring, early summer.

CRANBERRY-TREE (*Viburnum Opulus*). Honeysuckle family.

Rather tall shrub, upright; flowers in flat clusters (compound cymes); corolla 5-lobed; *leaves 3-lobed, broad*, lobes sharply toothed; fruit bright red berries (drupes). Low ground. Early summer.

COMMON ELDER (*Sambucus Canadensis*) Honeysuckle family.

Ht. few-10 ft.; flowers in flat clusters (cymes); *leaflets 5-11*, toothed, oblong; fruit a purple or black berry (drupe). Rich soil. Early summer. (See illustration in "Directions.")

RED-BERRIED ELDER (*Sambucus racemosa*). Honeysuckle family.

Similar but flowers in *pyramidal* clusters (panicked cymes); fruit a red berry (drupe). Rocky woods. Spring.

9. Leaves opposite, stem not four-sided, plant upright, flowers in cluster, shrub, leaves simple, and not lobed, petals 4.

ROUND-LEAVED DOGWOOD (*Cornus circinata*). Dogwood Family.

Rather tall shrub; flowers in flat clusters (cymes); branches *greenish*; leaves round-oval, short pointed, woolly beneath, short stalked. In shady places or on rocks. Spring, early summer.

PANICLED DOGWOOD (*Cornus paniculata*). Dogwood fam.

Rather tall shrub; flowers in loose clusters (cymes); branches *gray*; leaves short, broadly egg-shaped or lance-shaped, not toothed, tapering to point. Thickets and riverbanks. Spring, early summer.

RED-OSIER DOGWOOD (*Cornus stolonijera*). Dogwood fam.

Rather tall shrub; flowers in flat clusters (cymes); branches *purplish-red*; leaves egg-shaped, not toothed, short-pointed, somewhat rough, somewhat white beneath, with slender stalks. Woody places. Early summer.

10. Leaves opposite, stem not 4-sided, plant upright, flowers in cluster, shrub, leaves simple and not lobed, other than 4 petals.

BLACK HAW (*Viburnum prunijolium*). Honeysuckle fam.

Tall shrub or small tree; flowers in flat clusters (cymes); leaves short-stemmed, oval, obtusely pointed, fine-toothed. Dry places. Early spring-early summer.

Fig. 31.



Hobble-bush (*Viburnum lantanoides*).

HOBBLE-BUSH (*Viburnum lantanoides*). Honeysuckle fam.

Rather tall shrub; *small branches covered with reddish-brown rust*, straggling growth, branches sometimes taking root; flowers in flat clusters

(cymes), the outer flowers quite showy and with neither stamens nor pistils; leaves broadly egg-shaped, pointed, finely and sharply toothed. Low woods. Spring, early summer.

ARROW-WOOD (*Viburnum dentatum*). Honeysuckle family.

Rather tall shrub; twigs smooth; flowers all with stamens and pistils in flat clusters (cymes); leaves egg-shaped, pointed, somewhat heart-shaped at base, *coarsely* toothed. Moist places. Spring, early summer.

WITHE-ROD (*Viburnum cassinoides*). Honeysuckle family.

Rather tall shrub; flowers in flat clusters (cymes); leaves oval or pointed, with *fine rounded* teeth, or *without* teeth. Wet places. Early summer.

SWEET VIBURNUM. NANNY-BERRY (*Viburnum Lentago*). Honeysuckle family.

Tall shrub, bark somewhat scurfy; flowers in flat cluster; leaves broadly oval, with sharp points and close pointed teeth; leaf-stalks with margin. Spring.

II. LEAVES WHORLED.

11. Leaves whorled, flowers few.

CLEAVERS. BEDSTRAW (*Galium Aparine*). Madder family.

Stem delicate, length 2-5 ft.; stalks with 1-3 small flowers in axils on fine stalks; corolla 4- (sometimes 3-) parted; leaves 6-8 *in whorl*, inversely lance-shaped, tapering at base, blunt-pointed with rough edges; fruit a small double bur. Shady places. Summer.

SMALL BEDSTRAW (*Galium trifidum*). Madder family.

Ht. under 1½ ft.; stems slender; 1-7 minute flowers on fine stalks, axillary; leaves *in whorls of 4* linear or inversely lance-shaped. Wet ground. Summer.

ROUGH BEDSTRAW (*Galium asprellum*). Madder family.
Length 2-7 ft.; flowers as above; corolla 4- (some-
times 3-) parted; leaves *in whorls of 5-6*; stem
square, prickly backwards. Moist ground. Summer.

12. Leaves whorled, flowers solitary, 3 petals.

LARGER WHITE TRILLIUM (*Trillium grandiflorum*).
Lily family.

Av. ht. 1 ft.; flowers on *erect* stalks with 3 large
petals; leaves (3) egg-shaped, pointed. Rich
woods. Early spring-early summer.

NODDING TRILLIUM (*Trillium cernuum*). Lily family.

Similar but smaller flowers, with petals white or
pink, on *curved* stalk.

PAINTED TRILLIUM (*Trillium erythrocarpum*). Lily family.

Similar, also with smaller flowers, white petals with
purple stripes.

13. Leaves whorled, flowers solitary, apparently 4 petals.

BUNCHBERRY (*Cornus Canadensis*). Dogwood family.

Ht. 4-8 in.; real flowers small, greenish, in a head
about which is an involucre of white leaves like
petals; leaves 4-6 in whorl, egg-shaped or oval,
pointed. Damp woods. Early summer.

15. Flowers solitary, other than 3, or than apparently 4, petals.

WOOD ANEMONE (*Anemone nemorosa*). Crowfoot family.

Low plant; flowers rather large with 4-9 sepals
resembling petals; no corolla; leaves at base on
long stalks, leaves (3) below flower, 3-5 parted.
Woods. Early spring.

STAR-FLOWER (*Trientalis Americana*). Primrose family.

Low plant; flower on slender stalk; calyx mostly
7-parted; corolla mostly 7-parted, spreading, flat;
leaves (5-10) *whorled at top of stem*, lance-shaped,
tapering. Spring, early summer.

THIMBLE-WEED (*Anemone Virginiana*). Crowfoot family.

Ht. 2 ft. or over, stout, *hairy*; flowers with 5 white petal-like sepals, no corolla; leaves at base long-stalked, 3-parted; below flower 3 leaves on short stalks with pointed lobes; fruit *oval* or oblong. Woods and meadows. Early summer.

LONG-FRUITED ANEMONE (*Anemone cylindrica*). Crowfoot family.

Ht. 1 ft. or over; similar to above with smoothly haired stem; leaves at base 3-5 parted; fruit narrowly *cylindrical*, 1 in. or over.

CANADA ANEMONE (*Anemone Pennsylvanica*). Crowfoot family.

Ht. 1 ft. or over; similar to above, *hairy*, with spherical fruit. Early summer.

16. Leaves whorled, flowers in umbel.

RUE ANEMONE (*Anemonella thalictroides*). Crowfoot family.

Low plant; flowers rather large, several in umbel; sepals numerous resembling petals; petals none; leaflets apparently whorled under the flowers on slender stalks; leaves compound with leaflets roundish, somewhat three-lobed at the end, *heart-shaped at base*. Woods. Early spring-early summer.

GINSENG (*Aralia quinquefolia*). Ginseng family.

Ht. under 1 ft.; leaves long-stalked, 3 in whorl, palmately compound; 5 leaflets finely toothed with long stalks; flowers *small*; fruit bright red. Rich woods. Early spring.

DWARF GINSENG (*Aralia trifolia*). Ginseng family.

Low plant; flowers *minute*, many in umbel; leaves near top 3 in whorl palmately compound, leaflets finely toothed; fruit yellowish. Rich woods. Summer.

17. Leaves whorled, flowers in cluster, plant 2 ft. or over.

STARRY CAMPION (*Silene stellata*). Pink family.

Ht. 2 ft. or over; flowers in large open cluster (panicle); corolla $\frac{3}{4}$ in. wide, petals (5) fringed; leaves in whorls of 4, egg-lance-shape, long, pointed. Woods. Early summer–autumn.

See also SPURGE (upper leaves whorled or opposite) in 61.

18. Leaves whorled, flowers in clusters, plant under 2 ft.

PIPSISSEWA (*Chimaphila umbellata*). Heath family.

Ht. less than a foot; flowers in terminal cluster; 5 petals; leaves evergreen, somewhat lance-shaped, in several whorls. Dry woods. Early summer.

SPOTTED PIPSISSEWA (*Chimaphila maculata*). Heath family.

Similar to above but upper surface of leaves variegated with white.

19. Leaves whorled, flowers in spike.

CULVER'S-ROOT (*Veronica Virginica*). Figwort family.

Ht. few ft.; upright; flowers small in spikes, spikes mostly clustered at top; leaves lance-shaped, with fine teeth. Wet places. All summer.

III. LEAVES NOT OPPOSITE OR WHORLED.

20. Leaves from root only, or under water, water plant.

WATER ARUM (*Calla palustris*). Arum family.

Ht. under 1 ft.; flowers small, green, on spadix about 1 in. long with large white spathe; leaves broadly heart-shaped, long-stalked. Bogs. Spring, early summer.

ARROWHEAD (*Sagittaria variabilis*). Water Plantain fam.
Ht. several in. to several ft.; flowers 3 in whorl;
petals 3; leaves on long stalks, arrow-shaped. In
water or wet places. Summer.

PIPE-WORT (7-ANGLED) (*Eriocaulon septangulare*). Pipe-
wort family.

Ht. few in.; flowers *minute in small heads* at end of
delicate scape; scape 4-7 angled; leaves ($\frac{1}{2}$ -3 in.
long), pointed, narrow, with parallel veins, spread-
ing from base. In quiet water or near it. Summer,
autumn.

Fig. 32.



Pipe-wort (*Eriocaulon septangulare*)

FLOATING HEART (*Limnanthemum lacunosum*). Buck-
bean family.

Flowers in umbel near top of long stems with
egg- to heart-shaped floating leaves; corolla some-
what wheel-shaped, 5-parted. Shallow water.
All summer.

WHITE WATER CROWFOOT (*Ranunculus trichophyllus*).
Crowfoot family.

Small flowers rising out of water on slender stalks;
petals 5, rounded; leaves finely dissected, under
water. Summer.

See also WATER PLANTAIN (26).

21. Leaves from root only, land plant, flowers in spike.

RATTLESNAKE PLANTAIN (*Goodyera pubescens*). Orchis family.

Av. ht. 1 ft.; flowers small, whitish; leaves with prominent veining, egg-shaped. Rich woods. Summer.

LADIES' TRESSES (*Spiranthes gracilis*). Orchis family.

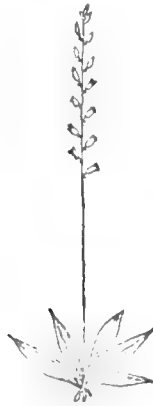
Low plant; slender, many flowered, scape bearing bracts; flowers small in twisted spike; leaves narrow. Woods and sandy places. Summer, autumn.

22. Leaves from root only, land plant, flowers in raceme,
plant over 1 ft.

GREAT GREEN ORCHIS (*Habenaria orbiculata*). Orchis family.

Ht. 1 ft. or over; flowers whitish in *open raceme* with very long spur; leaves (2) large, round, lying flat on ground. Woods. Summer.

Fig. 33.



Colic-root (*Aletris farinosa*).

COLIC-ROOT (*Aletris farinosa*). Bloodwort family.

Max. ht. 3 ft.; flowers small, scurfy, tubular, in long, slender spike-like raceme, at end of slender stem; leaves pointed. Woods. July, Aug.

23. **Leaves from root only, land plant, flowers in raceme, plant 1 ft. or under, leaves simple, not evergreen.**

FOAM-FLOWER (*Tiarella cordifolia*). Saxifrage family.
Ht. 1 ft. or under; flowers delicate in long raceme, preceding leaves; *petals* 5; leaves somewhat heart-shaped. Woods. Early spring.

WHITLOW-GRASS (*Draba verna*). Mustard family.
Ht. few in.; flowers small, 4 *petals*, 2-cleft; leaves clustered at root, hairy. Roadsides and fields. Early spring.

ROUND-LEAVED SUNDEW (*Drosera rotundifolia*). Sundew family.
Ht. several in.; flowers very small; 5 petals; leaves *round, with long hairy stalks, covered with bristles*. Bogs. Early summer.

THREAD-LEAVED SUNDEW (*Drosera filiformis*) is somewhat taller, has thread-like leaves and is found near the coast (Pink 17).

24. **Leaves from root only, land plant, flowers in raceme, plant 1 ft. or under, leaves compound.**

DUTCHMAN'S-BREECHES (*Dicentra Cucullaria*). Fumitory family.
Delicate plant; flowers tipped with cream-color; corolla *with 2 broadly spreading spurs*; leaves with slender stalks and much divided. Woods. Early spring.

BUCK-BEAN (*Menyanthes trifoliata*). Gentian family.
Ht. 1 ft. or under; flowers $\frac{1}{2}$ in. long, white or with reddish tinge; corolla 5-cleft; leaves of 3 *leaflets on long stem*. Bogs. Spring, early summer.

25. **Leaves from root only, land plant, flowers in raceme, plant 1 ft. or under, leaves simple, evergreen (Pyrola).**

SHIN-LEAF (*Pyrola elliptica*). Heath family.
Ht. several in.; 5 rounded petals; *long style*; leaves thin, oblong or egg-shaped. Rich woods. Early summer.

ROUND-LEAVED PYROLA (*Pyrola rotundifolia*). Heath family.

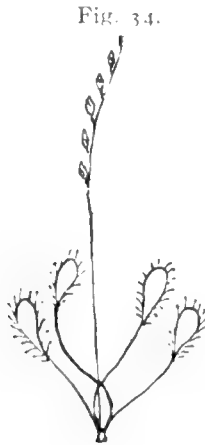
Ht. 1 ft. or under. Similar to above but leaves round, thick, shining, on long stalks.

ONE-SIDED WINTERGREEN (*Pyrola secunda*). Heath family.

Similar but flowers all turning to one side; leaves egg-shaped, thin.

LESSER WINTERGREEN (*Pyrola minor*). Heath family.

Ht. few in.; similar with small flowers; style short.



Round-leaved sundew (*Drosera rotundifolia*).

26. Leaves from root only, land plant, flowers in cluster.

EARLY SAXIFRAGE (*Saxifraga Virginiensis*). Saxifrage family.

Ht. under 1 ft.; flowers small in loose clusters (panicles); petals 5; leaves with rounded teeth. Dry hillsides. Early spring, early summer.

SWAMP SAXIFRAGE (*Saxifraga Pennsylvanica*). Saxifrage family.

Taller; stem erect, sometimes 3 ft.; flowers whitish, petals linear; leaves broadly lance-shaped, blunt-pointed. Wet banks. Spring.

WATER PLANTAIN (*Alisma Plantago*). Water-plantain family.

Av. ht. 2 ft.; *flowers small; petals 3*; leaves long-stalked, egg-shaped, pointed. Wet places or shallow water. Early summer.

STAR OF BETHLEHEM (*Ornithogalum umbellatum*). Lily family.

Ht. 1 ft. or under; flowers in terminal cluster on rather long stalks; petals 6, long; leaves linear. Fields, etc. Mass.—South and West.

27. Leaves from root only, land plant, flowers apparently solitary or few, petals 5, flower violet-shaped.

SWEET WHITE VIOLET (*Viola blanda*). Violet family.

Ht. few in.; flowers sweet-scented; lower markedly veined; leaves *round, heart-shaped or kidney-shaped*. Damp places. Early spring.

LANCE-LEAVED VIOLET (*Viola lanceolata*). Violet family.

Ht. few in.; leaves not toothed, *lance-shaped*. Damp soil. Early spring—early summer.

28. Leaves from root only, land plant, flowers apparently solitary or few, petals 5, flowers not violet-shaped.

WOOD SORREL (*Oxalis Acetosella*). Geranium family.

Ht. few in.; petals white with pink veins, sometimes notched; leaves *with three leaflets*, inversely heart-shaped, drooping at night. Deep woods. Spring, summer.

ONE-FLOWERED PYROLA (*Moneses grandiflora*). Heath family.

Ht. few in.; flower wax-like with broad rounded petals; *style long and straight*; leaves with teeth. Woods. Early summer.

DALIBARDA REPENS. Rose family.

Low plant; flowers nearly $\frac{1}{2}$ in. across; calyx deeply 5–6 parted; stamens many; leaves *heart-shaped*, with rounded teeth, on slender stalks. Woods. Early summer.

GRASS OF PARNASSUS (*Parnassia Caroliniana*). Saxi-
frage family.

Ht. 2 ft. or under; flowers 1-1½ in. broad; leaves
thick, broadly oval or egg-shaped, obtusely pointed,
sometimes heart-shaped. Wet places. Early
summer.

Fig. 35.



One-flowered pyrola (*Moneses grandiflora*).

NORTHERN WILD STRAWBERRY (*Fragaria Canadensis*).
Rose family.

Av. ht. 5 in.; springing from runners; flowers few
on long hairy leafless stalk; petals 5; leaflets 3,
toothed, rounded, on long hairy stalk. Open
ground. Spring and summer.

AMERICAN WOOD STRAWBERRY (*Fragaria Americana*).
Rose family.

Max. ht. 6 in.; flowers solitary or few, on long
stalks; petals 3, broad, *sepals bent back*; leaves on
long stalks, of 3 inversely egg-shaped leaflets with
pointed teeth. Rocky ground. Spring, summer.

29. Leaves from root only, land plant, flowers apparently solitary or few, not with 5 petals, growing in mud.

MUDWORT (*Limosella tenuifolia*). Figwort family.

Max. ht. $1\frac{1}{2}$ ft.; flowers small on slender stalks; corolla bell-shaped, 5-cleft; leaves linear, longer than flower stalks.

GOLDTHREAD (*Coptis trifolia*). Crowfoot family.

Ht. few in.; sepals 5-7, petal-like; petals 5-6; leaves shiny, leaflets (3) sharply toothed. Bogs. Spring, summer.

30. Leaves from root only, land plant, flowers apparently solitary or few, not with 5 petals, not growing in mud.

TWIN-LEAF (*Jeffersonia diphylla*). Barberry family.

Av. ht. 1 ft.; flower 1 in. on long leafless stem, 8 petals, 4 sepals; root-leaves with long stalks, divided into 2 leaflets. Early spring.

Fig. 36.



Twin-leaf (*Jeffersonia diphylla*). Petals wanting in dried specimen.

BLOOD-ROOT (*Sanguinaria Canadensis*). Poppy family.

Low plant; flower 1 in. or more across; petals 8-12, long, pointed; stamens numerous; leaf kidney-shaped, lobed, $\frac{1}{2}$ -1 ft. across. Rich woods. Early spring.

31. Leaves from root only, land plant, flowers in umbel.

WILD LEEK (*Allium tricoccum*). Lily family.

Ht. few in.—1½ ft.; flowers many, small on long stalks; perianth of 6 parts. Woods. Early summer.

32. Without leaves.

DODDER. LOVE VINE (*Cuscuta Gronovii*). Convolvulus family.

A parasite, growing over other plants; stems fragile, orange colored; flowers small in dense clusters (cymes), corolla bell-shaped, its borders generally 5-cleft. Late summer and autumn.

INDIAN PIPE. CORPSE-PLANT (*Monotropa uniflora*). Heath family.

Ht. under 1 ft.; waxy, single flower at top of stem, petals 4-5-6. Rich woods. Early summer.

Fig. 37.



Pine sap (*Monotropa Hypopitys*).

PINE SAP (*Monotropa Hypopitys*). Heath family.

Similar to above but flowers *in raceme*. White, reddish-yellowish spots.

33. Leaves (neither opposite, wanting, nor from root only) compound or finely dissected, flowers in spike.

GREAT BURNET (*Poterium Canadense*). Rose family.
Max. ht. 6 ft.; flowers in feathery spike; stem tall and slender; leaflets pointed, coarsely and sharply toothed. Bogs and meadows. Midsummer.

Fig. 38.



Great burnet (*Poterium Canadense*).

34. Leaves (neither opposite, wanting, nor from root only) compound or finely dissected, flowers in raceme.

WHITE BANEERRY (*Actaea alba*). Crowfoot family.
Ht. abt. 2 ft.; flowers in broad raceme; sepals 4-5; petals numerous, slender; leaves of many leaflets; leaflets pointed, cut and toothed; white berries on stout red stalks. Rich woods. Early spring.

RED BANEERRY (*Actaea rubra*). Crowfoot family.
Similar to above but petals broadening at end, flower-stalks slender, berries red.

SMALL BITTER CRESS (*Cardamine hirsuta*). Mustard family.

Ht. under 2 ft.; sepals 4, petals 4; leaves pinnate, leaflets rounded or linear. Wet places. Spring, summer.

WATER CRESS (*Nasturtium officinale*). Mustard family.
Water plant; sepals 4, petals 4; leaves pinnate;
leaflets 3-11, round or oblong, almost without
teeth. Brooks and ditches.

WHITE SWEET CLOVER. WHITE MELILOT (*Melilotus
alba*). Pulse family.
Av. ht. 3 ft.; flowers small, papilionaceous, fra-
grant, in slender racemes; leaflets 3. Waste
grounds. Early summer-autumn.

Fig. 39.

White sweet clover (*Melilotus alba*).

BLACK SNAKE-ROOT. BLACK COHOSH (*Cimicifuga race-
mosa*). Crowfoot family.

Ht. several ft.; flowers in long racemes; sepals 4
or 5; petals 4-8; stamens many; leaves 2-3 times
divided; leaflets pointed, sharply toothed. Rich
woods. Summer.

See also WATER-LEAF (40).

35. Leaves (neither opposite, wanting, nor from root only) compound
or finely dissected, flowers in umbel, plant 1 ft. or under.

HARBINGER-OF-SPRING (*Eriogonum bulbosum*). Parsley family.
Ht. under 1 ft.; flowers few, small, in compound
umbels; 5 petals; leaves 2-4, long-stalked, many
narrow leaflets. Limited localities, e.g., Washing-
ton. Early spring.

WILD SARSAPARILLA (*Aralia nudicaulis*). Ginseng family.
Stem 1 ft. high, with a long-stalked leaf of many pointed leaflets; flowers small *on leafless stem*.
Damp woods. Spring, early summer.

36. Leaves (neither opposite, wanting, nor from root only) compound or finely dissected, flowers in umbel, over 1 ft., leaves dissected.

CARAWAY (*Carum Carui*). Parsley family.
1 ft. or over; stem *smooth*; flowers delicate in compound umbel. Spring and summer.

MOCK BISHOP-WEED (*Discopleura capillacea*). Parsley family.
Ht. 1 ft. or over; umbel with many rays; leaves filiform. Wet ground. Early summer–autumn.

WILD CARROT. QUEEN ANNE'S LACE (*Daucus Carota*). Parsley family.
Stem *with bristles*; flowers small in compound umbel, becoming hollowed in centre. Roadsides and fields. Early summer. (See Colored Plate I).

37. Same as 36, but leaves not dissected.

N.B.—It will be desirable to study the text-books before attempting to distinguish the members of this group.

SANICLE. BLACK SNAKE-ROOT (*Sanicula Marylandica*). Parsley family.
Max. ht. 4 ft.; flowers in small heads in small umbels; *lower leaves with long stalks, upper without stalks, several-parted (palmately)*, the divisions generally toothed. Woods. Spring, summer.

SWEET CICELY (*Osmorrhiza longistylis*). Parsley family.
Max. ht. 3 ft.; *smooth or slightly hairy*; flower small, style long; leaves 3-times compound; leaflets *egg-shaped*, variously toothed; root aromatic. Woods. Spring, early summer.

BRISTLY SARSAPARILLA (*Aralia hispida*). Parsley family.

Max. ht. 3 ft.; *stem with bristles*; flower-stalk terminal, umbels of small flowers; leaves twice divided; leaflets oblong to egg-shaped, pointed, sharply toothed. Rocky and sandy places. Early summer.

SPOTTED COWBANE. WATER HEMLOCK (*Cicuta maculata*). Parsley family.

Max. ht. 6 ft.; stem stout, *with purple streaks*; leaves 2-3 times pinnately compound, the lower on long stalks, with coarse teeth. Wet ground. Early summer.

COW PARSNIP (*Heracleum lanatum*). Parsley family.

Max. ht. 8 ft.; stout, woolly, with *grooved stem*; large leaves 3 times compounded, broad leaflets irregularly cut, toothed; *leaf-stalk clasping*. Wet ground. Early summer.

HONEWORT (*Cryptotaenia Canadensis*). Parsley family.

Max. ht. 3 ft., smooth; umbels with few rays; leaves of 3 *leaflets*, egg-shaped, double-toothed. Summer.

PURPLE-STEMMED ANGELICA (*Angelica atropurpurea*). Parsley family.

Max. ht. 6 ft.; *stout purple stem*; leaves 2-3 times pinnately compound; leaflets broad. River banks. Early summer.

WATER PARSNIP (*Sium cicutaefolium*). Parsley family.

Max. ht. 6 ft.; stout; leaves *pinnate*; several pairs of narrow leaflets. Wet places. Summer and autumn.

38. Leaves (neither opposite, wanting, nor from root only) compound or finely dissected, flowers in cluster, leaves finely dissected.

YARROW (*Achillea Millefolium*). Composite family.

Max. ht. 2 ft.; flowers small, rarely pink, composite, in flat-topped clusters (compound corymbs); leaflets finely dissected. Common, fields and roadsides. Summer and autumn.

39. Same as 38, but leaves with 3 leaflets, not finely dissected.

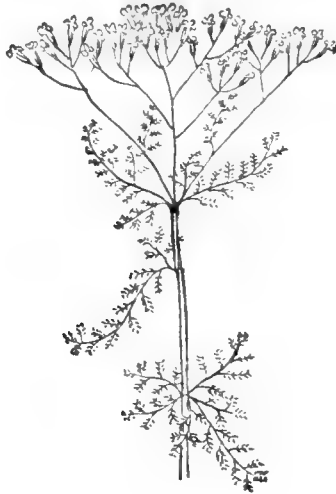
CRINKLE-ROOT. TOOTHWORT (*Dentaria diphylla*). Mustard family.

Av. ht. 1 ft.; flowers in cluster (or short raceme) at end of stem; 4 sepals; 4 petals; leaves 2; leaflets 3; root jointed, of pleasant taste. Rich woods. Early spring, early summer. South and West.

THREE-TOOTHED CINQUEFOIL (*Potentilla tridentata*). Rose family.

Ht. under 1 ft., flowers with 5 petals; leaflets 3, oblong, broad, 3-toothed at end. Early summer.

Fig. 40.



Yarrow (*Achillea Millefolium*).

40. Same as 38, but leaves not finely dissected and not with 3 leaflets.

TALL MEADOW RUE (*Thalictrum polygamum*). Crow-foot family.

Av. ht. 6 ft.; flowers small in compound panicles; delicate foliage; leaves 2-3 times compound; leaflets numerous, rounded. Wet places and roadsides.

SPIKENARD (*Aralia racemosa*). Ginseng family.

Ht. several ft.; stem widely branched; flowers small, very many in long clusters (racemose umbels); *leaflets heart-shaped*, with double teeth. Rich woods. Summer.

WATER-LEAF (*Hydrophyllum Virginicum*). Water-leaf family.

Ht. 1 ft. or over; flowers in curled-up raceme-like clusters, bell-shaped; leaves with several divisions, coarsely toothed, pointed. Woods. Summer.

41. Leaves (neither opposite, wanting, nor from root only) compound or finely dissected, flowers not in spike, raceme, umbel or cluster.

LOW BLACKBERRY (*Rubus Canadensis*). Rose family. Trailing, *slightly prickly*; calyx 5-parted, petals 5; leaflets 3 (or 5-7). Dry fields. Early spring.

WHITE AVENS (*Geum album*). Rose family.

Ht. 2 ft.; flowers few on long hairy stalks; petals 5; stamens many; root-leaves generally of 3-5 leaflets; stem-leaves 3-divided, or lobed or toothed. Borders of woods. Spring, summer.

RUNNING SWAMP BLACKBERRY (*Rubus hispidus*). Rose family.

Slender stem with *backward bending* prickles; flowers small; leaflets 3 (rarely 5), inversely heart-shaped, coarsely toothed. Low woods or moist ground.

WHITE CLOVER (*Trifolium repens*). Pulse family.

Ht. under 1 ft.; stems spreading, smooth; *flower-heads spherical*, the florets (papilionaceous) finally bent back and spreading; 3 leaflets, somewhat inversely heart-shaped. Open places. Spring-autumn.

MAYWEED. CHAMOMILE (*Anthemis Cotula*). Composite family.

Av. ht. 3 ft.; branching, *strong-scented*; flowers *composite*; rays white, disk yellow; flower-heads few on long stalks; leaves *finely dissected*. Roadsides. Summer and autumn.

Fig. 41.



Chamomile (*Anthemis Cotula*).

42. Leaves (neither opposite, wanting, nor from root only) simple, flowers in long spike.

LADIES' TRESSES (*Spiranthes gracilis*). Orchis family.

Low plant; flowers small in twisted spike; leaves narrow. Woods and sandy places. Summer and autumn.

LIZARD'S TAIL (*Saururus cernuus*). Pepper family.

Flowers in delicate spike (or raceme) nodding at end; flowers fragrant; leaves *heart-shaped with stalks*. Swamps. Early summer. Conn., South and West.

WATER PEPPER (*Polygonum hydropiperoides*). Buckwheat family.

Ht. 1-few ft.; spikes slender, *interrupted*; flowers small; calyx 5-cleft, no corolla; leaves lance-shaped. Wet places. Early summer.

43. Leaves (neither opposite nor from root only) simple, flowers in short spike.

WHITE FRINGED ORCHIS (*Habenaria blephariglottis*).
Orchis family.

Ht. 1 ft.; petals broad at end, usually toothed,
lip fringed. Bogs and edge of ponds. Summer.

NORTHERN WHITE ORCHIS (*Habenaria dilatata*). Orchis
family.

Ht. 1 ft. or more; spur delicate and curved; *leaves linear*. Bogs. Summer.

44. Leaves (neither opposite, wanting, nor from root only) simple, flowers in raceme, plant climbing, trailing or spreading.

WILD BALSAM-APPLE (*Echinocystis lobata*). Gourd family.
Tall annual, climbing by tendrils; flowers axillary,
small, generally in racemes, or clusters; leaves thin
with 5 lobes; fruit large, green, covered with spines.
Rich soil. Summer.

Fig. 42.



Climbing false buckwheat (*Polygonum scandens*).

CLIMBING FALSE BUCKWHEAT (*Polygonum scandens*).
Buckwheat family.

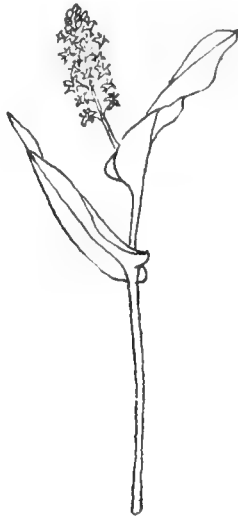
Running along ground or climbing; flowers small in
short racemes; leaves somewhat *heart-shaped*, pointed.

45. Leaves (neither opposite, wanting, nor from root only) simple, flowers in raceme, plant upright, herbs under 4 ft.

WILD LILY-OF-THE-VALLEY (*Maianthemum Canadense*).
Lily family.

Ht. few inches; flowers small with 4-parted perianth; stamens 4; leaves 2 or 3, long, pointed, *heart-shaped at base*, without stalks or with very short ones. Woods. Spring, summer.

Fig. 43.



Wild lily-of-the-valley (*Maianthemum Canadense*.)

WATER PIMPERNEL (*Samolus Valerandi*). Primrose family.

Ht. $\frac{1}{2}$ –1 ft.; flower-stalks long and delicate; leaves *without teeth*, inversely egg-shaped or spoon-shaped, those at base clustered. Wet places. Spring, summer.

PEPPERGRASS (*Lepidium Virginicum*). Mustard family.
Av. ht. 1 ft.; a common roadside weed with branches bearing *small keeled pods of peppery taste*, in a long raceme and a few terminal blossoms; flowers small; leaves lance-shaped, those at base inversely egg-shaped. Spring, autumn.

DEVIL'S-BIT (*Chamaelirium Carolinianum*). Lily family.

Max. ht. 4 ft.; with long leafy stem ending in a raceme, sometimes 1 ft. long; flowers very small; leaves without stalks, those at base clustered. Moist ground. Spring, summer.

Fig. 44.



Devil's-bit (*Chamaelirium Carolinianum*).

SHEPHERD'S-PURSE (*Capsella Bursa-pastoris*). Mustard family.

Av. ht. 1 ft.; flowers small, petals 4; pods triangular, flat; leaves at base clustered, deeply toothed, those of stem pointed without stalks. Very common weed. All summer.

GREEN ADDER'S-MOUTH (*Microstylis ophioglossoides*). Orchis family.

Low, slender plant; flowers minute, greenish-white, long-stalked; leaf single, oval, without stalk. Low ground. July.

46. Same as 45, but shrubs and tall herbs.

- SHAD-BUSH (*Amelanchier Canadensis*). Rose family.
Tall; flowers *large*, in drooping racemes, petals (5) oblong; leaves egg-shaped to oblong, usually somewhat heart-shaped at base, pointed, sharply toothed; fruit a red berry, ripening early. Dry open woods. Early spring.
- CHOKO CHERRY (*Prunus Virginiana*). Rose family.
Tall shrub, grayish bark; flowers *small*, petals (5) rounded; leaves egg-shaped to oblong, obtusely pointed, with fine teeth. Riverbanks, etc. Early spring.
- LEUCOTHÖE RACEMOSA. Heath family.
Tall shrub; flowers in long, *one-sided*, terminal, branching racemes; leaves broadly lance-shaped. Thickets. Spring, early summer.
- DANGLEBERRY (*Gaylussacia frondosa*). Heath family.
Max. ht. 6 ft.; branches slender and spreading; corolla *round-bell-shaped*; flowers in loose compound racemes; leaves egg-shaped to oblong, *pale*, with *bloom beneath*.
- SWEET PEPPERBUSH (*Clethra alnifolia*). Heath family.
Tall shrub; terminal upright racemes; *flowers fragrant*, sepals 5, petals 5, rounded; *style long*; leaves *inversely egg-shaped*, toothed. Summer.
- POKE. GARGET (*Phytolacca decandra*). Poke-weed family.
Tall, perennial *herb*, stout, spreading, with *red or purple stem*; raceme at end, or opposite the leaves; calyx white with 5 rounded sepals like petals; leaves *large*, pointed, *sometimes 1 ft. long*. Low ground. Summer.
- LEATHER-LEAF (*Cassandra calyculata*). Heath family.
Rather low shrub, widely branching; flowers urn-shaped, small, in leafy racemes at end of branches; leaves oblong, stiff, evergreen, shiny above. Wet places. Early spring, early summer.

47. Leaves (neither opposite nor from root only) simple, flowers solitary or few, large.

LAUREL MAGNOLIA. SWEET BAY (*Magnolia glauca*).
Magnolia family.

Tall shrub; flowers large, globular, very fragrant; leaves thick. Swamps. Early summer.

MAY-APPLE. MANDRAKE (*Podophyllum peltatum*). Barberry family.

Ht. 1 ft.; flower-stem with two large leaves; flowers from crotch, nearly 2 in. broad; *sepals* 6; petals about 7, inversely egg-shaped; *flowerless stem ending in a large (1 ft.) round, lobed leaf, leaf-stalk inserted in the middle like an umbrella*. Rich woods. Spring. Western Quebec, West and South.

Fig. 45.



Leather-leaf (*Cassandra calyculata*).

Fig. 46.



Thorn-apple (*Datura Stramonium*.)

THORN-APPLE (*Datura Stramonium*). Nightshade family.

Ht. several ft.; rank, bad-smelling weed; flowers 4 in., short-stalked in crotch of stem; corolla resembling morning glory; leaves rather large. Waste grounds.

OX-EYED or WHITE DAISY. WHITE-WEED (*Chrysanthemum Leucanthemum*). Composite family.

Stems erect, bearing single large flower-heads; rays white; disk yellow; root-leaves broad at end, with stalk, others partly clasping, all pinnately cut or toothed. Fields and meadows. Early summer.

48. Leaves (neither opposite, wanting, nor from root only) simple, flowers apparently solitary or few, size of flower not over 1 in., plant upright.

MOUNTAIN HOLLY (*Nemopanthes fascicularis*). Holly family.

Shrub, av. ht. 7 ft., bark gray; petals 4-5, oblong-linear; leaves oblong, with stalks, without teeth or slightly toothed. Woods. Spring.

CANADA VIOLET (*Viola Canadensis*). Violet family.

Ht. 1-2 ft.; flowers of the violet, petals white, upper ones violet on under side; leaves heart-shaped. Rich woods. Spring, summer.

CLOUD-BERRY. BAKED-APPLE BERRY (*Rubus Chamaemorus*). Rose family.

Ht. under 1 ft.; 2-3 leaved; flowers ($\frac{1}{2}$ -1 in.) with 5 petals; leaves somewhat heart-shaped, lobed and with teeth. Swamps.

WINTERGREEN (*Gaultheria procumbens*). Heath family.

Ht. few inches; flowers few, in axils, nodding; corolla urn-shaped, 5-toothed; leaves evergreen, oval, obscurely toothed. Woods. Early summer.

49. Same as 48, but plant creeping or spreading.

CREEPING SNOWBERRY (*Chiogenes serpyllifolia*). Heath family.

Flowers in axils, corolla bell-shaped, 4-cleft; stamens 8; leaves small, rounded, evergreen, on short stalks; berry white, round. Bogs and woods. Spring, early summer.

BOG BILBERRY (*Vaccinium uliginosum*). Heath family.

Ht. 2 ft. or under; spreading; flowers solitary or few, almost without stalks; corolla urn-shaped; leaves without teeth, inversely egg-shaped or oblong, pale. Tops of mountains. Early summer.

GROUND CHERRY (*Physalis Virginiana*). Nightshade fam. Branched and spreading; flowers nodding along stem, each with stalk; corolla wheel-shaped; *centre yellow; leaves large and broad, toothed*. Light soil. Summer.

BINDWEED (*Convolvulus arvensis*). Convolvulus family. Low plant; corolla bell-shaped on long stalk, *leaves arrow-shaped*. Fields, near the coast. Early summer.

CHEESES (*Malva rotundifolia*). Mallow family. Low, creeping; flowers few, in axils; petals 5, notched, veined; *leaves round, long-stalked*, edges somewhat lobed, and round-toothed. Seed-receptacle round and flat. Common garden weed. Summer, autumn.

50. Same as 48, but moss-like.

CASSIOPE HYPNOIDES. Heath family. Ht. few in.; flowers solitary, *on delicate stalks*, corolla 5-cleft; leaves evergreen, awl-shaped. Mountains. Summer.

Fig. 47.



Cassiope hypnoides.

PYXIE (*Pyxidantha barbulate*). Diapensia family. Flowers solitary and *without stalks*, white or rose-colored; leaves narrow, pointed. *Sandy pines*. New Jersey to North Carolina. Early spring.

PEARLWORT (*Sagina procumbens*). Pink family.

Low spreading plant with matted linear leaves; flowers *very small on stalks longer than leaves*; sepals 4-5, petals sometimes wanting. *Moist places.*

51. Leaves (neither opposite, wanting, nor from root only) simple, flowers in cluster, plant climbing or creeping.

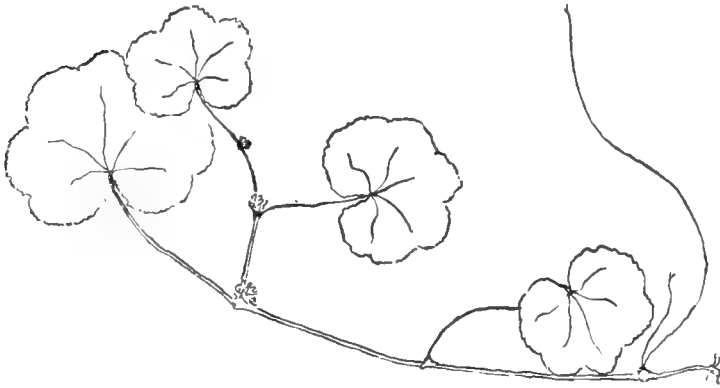
BEARBERRY (*Arctostaphylos Uva-ursi*). Heath family.

Flowers in short raceme-like clusters; corolla urn-shaped; leaves evergreen, thick, broadening at end, with short stalks; fruit red. Rocks and hills. Spring, early summer.

MOONSEED (*Menispermum Canadense*). Moonseed fam.

A climber; flowers small in open axillary clusters; sepals and petals similar; leaves broad with delicate stalks, 3-7 *angled or lobed*, shield-form, with stalk attached to lower surface. Woods. Early summer. West Quebec, West and South.

Fig. 48.



Water-pennywort (*Hydrocotyle Americana*).

WATER-PENNYWORT (*Hydrocotyle Americana*). Parsley family.

Delicate stems, creeping in wet places; flowers small in close clusters (umbels) in axils; leaves kidney-shaped; long-stalked. All summer.

ARROW-LEAVED TEAR-THUMB (*Polygonum sagittatum*).

Buckwheat family.

Stem square, generally climbing by backward-bending prickles; flowers very small, pale-rose color or white, in head or dense cluster; leaves arrow-shaped. Low grounds. Summer.

HALBERD-LEAVED TEAR-THUMB (*Polygonum arifolium*).

Buckwheat family.

Stem square, generally climbing by prickles; flowers very small; leaves halberd-shaped, *with long stalks*. Low ground.

WILD BALSAM APPLE (*Echinocystis lobata*). Gourd family.

Tall annual, climbing by tendrils; flowers axillary, small, generally in racemes, or clusters; leaves thin with 5 lobes; fruit large, green, covered with spines. Rich soil. Summer.

52. Leaves (neither opposite, wanting, nor from root only) simple, flowers in cluster, plant upright, shrub, over 5ft., with thorns.

COCKSPUR THORN (*Crataegus Crus-galli*). Rose family.

Shrub or small tree; *thorns long and slender*; calyx urn-shaped, petals 5; *leaves thick and shiny, inversely egg-shaped or lance-shaped*. Thickets.

HAWTHORN (*Crataegus coccinea*). Rose family.

Similar to above but *thorns stout and leaves thin*.

53. Leaves (neither opposite, wanting, nor from root only) simple, flowers in cluster, plant upright, shrub over 5 ft., without thorns, flowers urn- or bell-shaped.

GREAT LAUREL (*Rhododendron maximum*). Heath family.

Tall shrub; corolla bell-shaped, 1-2½ in. broad; leaves several in. long, thick, pointed. Damp woods. Summer.

HIGH-BUSH BLUEBERRY (*Vaccinium corymbosum*).
Heath family.

Max. ht. 10 ft.; flowers in close clusters; leaves inversely egg-shaped or oval. Swamps and thickets.

54. Same as 53, but flowers not urn- or bell-shaped.

ALTERNATE-LEAVED DOGWOOD (*Cornus alternifolia*).
Dogwood family.

Tall shrub; 4 sepals, 4 petals; leaves thickly set at top, egg-shaped or oval, long pointed. Hillsides. Spring, early summer.

BLACK ALDER. WINTERBERRY (*Ilex verticillata*). Holly family.

Tall shrub; flowers in clusters along stem, short-stalked; petals 4-6; leaves oval or inversely egg-shaped, pointed, toothed. Low ground. Spring, early summer.

CLAMMY AZALEA (*Rhododendron viscosum*). Heath family.

Shrub, max. ht. 10 ft.; flowers large and showy, in clusters; corolla clammy; leaves oblong-inversely egg-shaped, short-stalked. Swamps, especially near coast. Early summer.

MOUNTAIN LAUREL (*Kalmia latifolia*). Heath family.

Tall shrub; flowers white or pinkish in large clusters at end of branches; corolla saucer-shaped, 5-lobed; stamens 10; pistil 1; leaves pointed at both ends, thick and shiny. Woods. Spring, early summer.

GROUNDSEL-TREE (*Baccharis halimifolia*). Composite family.

Shrub, max. ht. 12 ft.; heads scattered or in panicles, corolla of several flowers very delicate, others 5-lobed; leaves inversely egg-shaped, stalked. Beaches. Autumn.

55. Leaves (neither opposite, wanting, nor from root only) simple, flowers in cluster, plant upright, shrub, not over 5 ft., flower urn- or bell-shaped.

BLACK HUCKLEBERRY (*Gaylussacia resinosa*). Heath fam. Flowers in short clusters or one-sided racemes; leaves oval-egg-shaped. Spring, early summer.

BEARBERRY (*Arctostaphylos Uva-ursi*). Heath family. Flowers in short *raceme-like clusters*; corolla urn-shaped; *leaves evergreen*, thick, broadening at end, with short stalks; fruit red. Rocks and hills. Spring, early summer.

MARSH ANDROMEDA (*Andromeda polifolia*). Heath fam. Shrub; av. ht. 1 ft.; flowers small, urn-shaped, in pendulous clusters; corolla 5-toothed; *leaves evergreen*, linear to lance-shaped, oblong, short-stalked, *edges rolling back*, white on under side. Bogs. Spring, early summer.

Fig. 49.



Marsh andromeda (*Andromeda polifolia*).

LOW BLUEBERRY (*Vaccinium vacillans*). Heath family. Max. ht. 4 ft.; branches covered with warts; leaves inversely egg-shaped or oval, blunt-pointed at both ends; flowers urn-shaped, rather long, on short stalks, not many in a cluster.

SQUAW HUCKLEBERRY (*Vaccinium stamineum*). Heath family.

Fine-hairy; anthers prominent; leaves egg-shaped or oval, pale. Woods. Early summer.

STAGGER-BUSH (*Andromeda Mariana*). Heath family.

Ht. few ft.; flowers pendulous, in *close clusters*; leaves oblong or oval. Low ground. Spring and summer.

56. Same as 55, but flowers not urn- or bell-shaped.

CHOKEBERRY (*Pyrus arbutifolia*). Rose family.

Ht. 1 ft. or over; flowers white, small, at or near top; petals (5) rounded or inversely egg-shaped; leaves oblong or inversely lance-shaped, mostly pointed. Thickets and hillsides. Early spring.

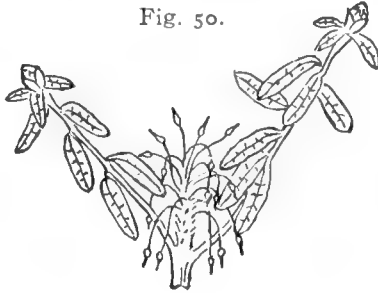
BEACH PLUM (*Prunus maritima*). Rose family.

Ht. several ft.; petals 5; leaves oval or egg-shaped, with teeth. Straggly growth. *Near sea*. Early spring.

LABRADOR TEA (*Ledum latifolium*). Heath family.

Evergreen shrub; ht. few ft.; branches woolly; flowers small in clusters resembling umbels; 5 petals; leaves evergreen, stiff, oblong, not toothed; *edges rolled back, under sides rusty*. Swamps and woods. Spring, early summer.

Fig. 50.



Labrador tea (*Ledum latifolium*).

NEW JERSEY TEA (*Ceanothus Americanus*). Buckthorn family.

Shrub; flowers small in close clusters; petals with hoods and claws; leaves egg-shaped, pointed, toothed, sometimes heart-shaped at base, short-stalked. Woodlands. Summer. Ontario, West and South.

57. Leaves (neither opposite, wanting, nor from root only) simple, flowers in cluster, plant upright, herb, flowers composite, with white rays.

DAISY FLEABANE (*Erigeron annuus*). Composite family.
Ht. 1—several ft.; ray-flowers white with many narrow rays; disk yellow; *flower-heads on stalks without leaves*; stem branching with *hairs*; leaves oval-egg-shaped with teeth. Waste places. Early summer.

HORSE-WEED (*Erigeron Canadensis*). Composite family.
Ht. 1—6 ft., upright, hairy, branching; *flower-heads small, cylindrical*, in large open cluster (panicle). Waste ground, common. Early summer—autumn.

WHITE ASTERS. Composite family.
Ray-flowers white, disk yellow, *flower-heads on leafy stalks*; *stems generally smooth or pubescent*.

SILVER-ROD (*Solidago bicolor*). Composite family.
Upright single stem or branched; flowers clustered along stem, few in cluster, small with whitish rays; leaves pointed. Dry ground. Summer and early autumn.

See also WILD LETTUCE (Yellow 22).

58. Same as 57, but flowers without white rays.

PLANTAIN-LEAVED EVERLASTING (*Antennaria plantaginifolia*). Composite family.
Ht. few in.—1½ ft.; stem woolly; heads with many tubular flowers; leaves not toothed, those of stem narrowly, those at base broadly lance-shaped, lying against stem. Banks. Early spring.

COMMON EVERLASTING (*Gnaphalium polycephalum*). Composite family.
Av. ht. 2 ft.; woolly, fragrant; flowers tubular, *flower-heads clustered at top*; leaves woolly on under side, lance-shaped, tapering at base. Fields and woods.

PEARLY EVERLASTING (*Anaphilis margaritacea*). Composite family.

Av. ht. 18 in.; many leafy heads at top; very small flowers, brown, tubular, with pearly scales; leaves many, lance-shaped, long-pointed without teeth. Dry ground. Late summer.

Fig. 51.

Silver-rod (*Solidago bicolor*).

Fig. 52.

Wild lettuce (*Lactuca Canadensis*).

Fig. 53.

Common everlasting (*Gnaphalium polycephalum*).

59. Leaves (neither opposite, wanting, nor from root only) simple, flowers in clusters, plant upright, herb, flowers (not composite) bell- or urn-shaped.

BASTARD TOAD-FLAX (*Comandra umbellata*). Sandalwood family.

Ht. under 1 ft.; stem with many leaves; flower-stalks clustered at top, several flowered; styles slender; calyx greenish-white with 5 star-like points; stamens 5; leaves oblong, short-stalked. Dry ground. Spring, early summer.

60. Same as 59, but flowers with 4 petals.

ROCK CRESS (*Arabis hirsuta*). Mustard family.

Ht. 1 ft. or over; sometimes hairy; flowers *small*; flower-stalks upright; stem-leaves toothed, *some clasping*. Rocks. Spring, early summer.

SPRING CRESS (*Cardamine rhomboidea*). Mustard family.

Flowers *large*; *root-leaves rounded*; stem-leaves, lower egg-shaped with short stalks, upper somewhat lance-shaped, without stalks, all slightly toothed. Wet places. Early spring-early summer.

Fig. 54.



Bastard toad-flax (*Comandra umbellata*).

61. Same as 59, but flowers with apparently 5 petals.

SPURGE (*Euphorbia corollata*). Spurge family.

Max. ht. 3 ft.; smooth or somewhat hairy; *upper leaves whorled* or *opposite*; flowers, in umbel, apparently of 5 petals (really each is cluster of flowers with white involucre); leaves varying from egg-shaped to linear, without teeth. Rich soil. Summer, autumn. Ontario, West and South.

MEADOW SWEET (*Spiraea salicifolia*). Rose family.

Max. ht. 3 ft.; practically without teeth; flowers *small in terminal clusters*, narrowing at top, white or pinkish, calyx 5-cleft, *petals* 5; leaves oval, with teeth, toothed. Meadows, etc. Late summer.

62. Same as 59, but flowers not urn- or bell-shaped, nor with 4 or 5 petals.

UMBRELLA-LEAF (*Diphylleia cymosa*). Barberry family.

Max. ht. 2 ft.; flowers many, in cyme; petals 6; stamens 6; one large leaf on a long stem from the base, 2-cleft with lobes deeply toothed, stem-leaves (2) similar but smaller. Woods. Spring, early summer. Penn. and South.

BUNCH FLOWER (*Melanthium Virginicum*). Lily family.

Ht. several ft.; flowers in cluster narrowing at base; sepals 6, like petals; leaves *long and narrow*. Wet places. Rhode Island, South and West.

FALSE SOLOMON'S SEAL (*Smilacina racemosa*). Lily family.

Av. ht. 2 ft.; single stem ending in upright cluster (compound raceme) of *small* white flowers; perianth of 6 divisions; *leaves long, pointed, with parallel veins*. Open woods. Late spring and summer. (See illustration under Red Fruits 7).

STOUT STENANTHEMUM (*Stenanthemum robustum*). Lily family.

Max. ht. 5 ft.; flowers in long panicle or raceme at end of stem; 6-divided perianth, divisions pointed, *each abt. $\frac{1}{4}$ in. long*, white and green; leaves long and slender. Moist ground. Summer. Penn., South and West.

PLATE I.



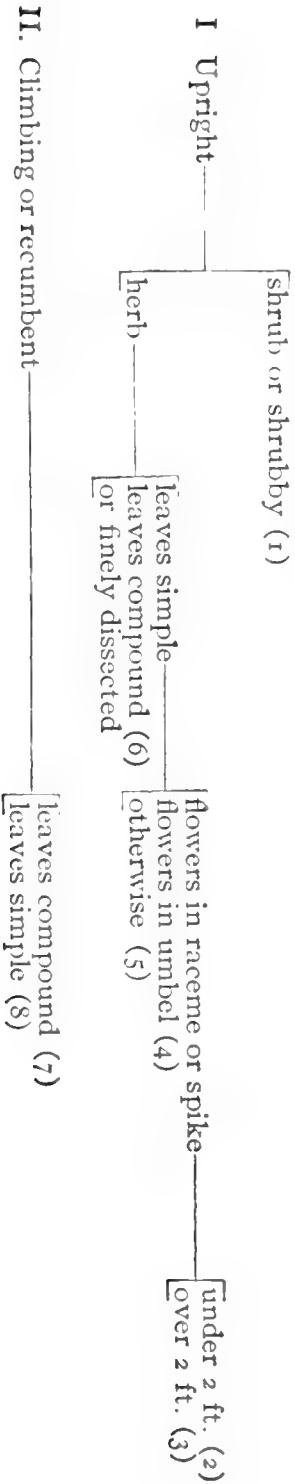
1. Swamp milkweed (*Asclepias incarnata*); 2. Queen Anne's lace (*Daucus Carota*);
3. Moth mullein (*Verbascum thapsus*); 4. Oswego tea (*Monarda didyma*); 5. Meadow
beauty (*Rhexia virginica*); 6, 7, 8. Pitcher-plant (*Sarracenia purpurea*).



GREEN OR GREENISH FLOWERS

GREEN OR GREENISH FLOWERS

(First, see whether plant falls in Class I or II; then follow out to right. When a number in parentheses is reached, this number indicates the group desired.)



GREEN OR GREENISH FLOWERS

I. UPRIGHT PLANTS.

1. Upright shrub.

POISON SUMACH. DOGWOOD (*Rhus venenata*). Cashew family.

Max. ht. 18 ft.; flowers small in *open axillary clusters*; leaves *compound*, leaflets 7-13, egg-shaped to oblong, *not toothed*; fruit *whitish* or dun colored. Swamps. Early summer.

STAGHORN SUMACH (*Rhus typhina*). Cashew family.

Tall shrub or small tree; branches *velvety*; flowers small, in *close terminal* clusters (panicles); leaves *compound*, leaflets 11-31, lance-shaped, pointed, *toothed*, narrower than leaves of above. Fruit *crimson*. Hillsides. Early summer.

MARSH ELDER (*Iva frutescens*). Composite family.

Ht. few feet to 8 feet; shrubby at base; small flower-heads in *raceme-like* arrangement in axils; upper leaves narrow and pointed; lower broader, pointed, coarsely toothed, scarcely stalked, *lower leaves opposite*. Marshy ground near sea. Summer.

2. Upright herb, leaves simple, flowers in raceme or spike, plant under 2 ft.

DITCH STONECROP (*Penthorum sedoides*). Orpine family.

Ht. $\frac{1}{2}$ -2 ft.; flowers small in forked spikes; petals 5; leaves short-stemmed, toothed. Summer, autumn.

SMARTWEED (*Polygonum Hydropiperoides*). Buckwheat family.

Max. ht. 2 ft.; flowers small in long racemes; leaves *long-pointed*, with short stems. Wet ground. Summer, autumn.

JERUSALEM OAK (*Chenopodium Botrys*). Goosefoot fam.
Weed, a ft. or two high; many branches; flowers small, with 3-cleft calyx, crowded along spikes at end of branches; leaves *with many lobes, resembling those of white oak*. "In autumn the leaves fall off and leave the seed-spike naked" (Matthews). Waste ground. Summer.

See also GREAT GREEN ORCHIS (W. 22).

3. Same as 2, but plant taller.

CURLED DOCK (*Rumex Crispus*). Buckwheat family.
Max. ht. 4 ft.; coarse herb with smooth stem; flowers small, crowded in long raceme; calyx enlarging in fruit (valve), heart-shaped; leaves *long, lance-shaped, with curly edges*. Waste places. Common. Early summer.

RAGWEED (*Ambrosia artemisiaefolia*). Composite family.
Ht. 1-several ft.; hairy, branching; flower-heads small, several (fertile) in axils of leaves, most (sterile) in long racemes; leaves (opposite and alternate) *pinnately cut*. A common weed. Summer, autumn.

4. Upright herb, leaves simple, flowers in umbel.

GREEN-FLOWERED MILKWEED (*Asclepias verticillata*).
Milkweed family.
Ht. 1-2½ ft.; flowers in small lateral and terminal umbels; leaves whorled, linear, with margins rolled back. Dry hills. Summer, autumn.

5. Upright herb, leaves simple, flowers not in raceme, spike or umbel.

SWAMP SAXIFRAGE (*Saxifraga Pennsylvanica*). Saxifrage family.
Ht. 2 ft.; flowers clustered, calyx 5-cleft; petals 5; leaves inversely lance-shaped, toothed. Bogs. Spring.

GREAT WATER-DOCK (*Rumex Britannica*). Buckwheat family.

Ht. several ft.; flowers small in panicle; sepals 6, no petals; leaves *very large*, 1-2 ft. long. Wet ground. Summer.

VIRGINIA SNAKEROOT (*Aristolochia Serpentaria*). Birthwort family.

Av. ht. 1 ft.; stem woolly; flowers small, greenish, few, near base of plant, on long stalks, with curved calyx; leaves *heart-shaped*, long pointed. Early summer. Conn., West and South.

6. Upright herb, leaves compound.

BLUE COHOSH (*Caulophyllum thalictroides*). Barberry fam.

Max. ht. 2½ ft.; flowers at end of stem in small raceme or open cluster; sepals 6; petals 6; leaves thrice compound; leaflets *inversely egg-shaped, lobed*. Rich woods. Early spring.

EARLY MEADOW RUE (*Thalictrum dioicum*). Crowfoot fam.

Max. ht. 2 ft.; flowers clustered; sepals 4-5, petal-like; petals none; leaves twice or thrice compound; leaflets *with stalks, drooping, rounded, lobed*. Rocky woods. Early spring.

TALL WORMWOOD (*Artemisia caudata*). Composite fam.

Av. ht. 3-4 ft.; flower-heads disk-shaped, small, in open cluster (panicle); leaves dissected into linear divisions. Sandy ground on coast. Summer.

II. CLIMBING OR RECUMBENT PLANTS.

7. Climbing or recumbent, leaves compound.

POISON IVY. POISON OAK (*Rhus Toxicodendron*). Cashew family.

Climbing or erect; flowers in loose axillary clusters; leaflets 3, rhombic to egg-shaped, mostly pointed, unequally notched, wavy or cut. Spring.

8. Climbing or recumbent, leaves simple.

CARRION-FLOWER (*Smilax herbacea*). Lily family.

Stem smooth; flowers small in *close, rounded clusters*, each with apparently 6 petals; leaves *somewhat heart-shaped*, obtusely pointed. Woods. Early spring, early summer.

BITTER-SWEET. WAX-WORK (*Celastrus scandens*). Staff-tree family.

Twining shrub; small flowers in clusters at ends of branches; leaves *egg-shaped—oblong*, with teeth. Early summer.

WATER PURSLANE (*Ludwigia palustris*). Evening Primrose family.

Max. length 15 in.; *lying on mud, sometimes in water*; flowers *solitary in axils*, small, somewhat bell-shaped; leaves oval-pointed, short stemmed, $\frac{1}{2}$ –1 in. long. Early summer–autumn.

See also CLIMBING FALSE BUCKWHEAT (White 44).

RED FLOWERS

RED FLOWERS

(First, see whether plant falls in Class I, II, or III; then follow out to right.
When a number in parentheses is reached, this number
indicates the group desired)

- | | | |
|-----------------------|---|---------------------------------------|
| I. Leaves opposite | — | upright (1)
climbing (2) |
| II. Leaves whorled | — | flowers solitary (3)
otherwise (4) |
| III. Leaves otherwise | — | stems hairy (5)
otherwise (6) |

RED FLOWERS

I. LEAVES OPPOSITE.

1. Leaves opposite, plant upright.

PIMPERNEL. POOR MAN'S WEATHER-GLASS (*Anagallis arvensis*). Primrose family.

Low plant; flowers solitary on axillary stalks; calyx and corolla 5-parted; stamens 5; leaves inversely egg-shaped without stalks. Fields. Early summer.

OSWEGO TEA. BEE-BALM (*Monarda didyma*). Mint fam.

Ht. abt. 2 ft., hairy, stem square; flowers in terminal head; calyx 5-toothed; corolla 2 in. long, 2-lipped, upper lip erect, lower 3-lobed; stamens long; leaves egg-shaped to lance-shaped, pointed, sharply toothed, with stalks. Woods. Summer. (See Colored Plate I).

Fig. 55.



Oswego tea (*Monarda didyma*).

HEDGE NETTLE (*Stachys palustris*). Mint family.

Max. ht. 3 ft.; flowers in interrupted spikes, 2-lipped, lower lip 3-lobed; leaves with rounded teeth, lower with short stems. Moist places. Summer.

FIRE PINK (*Silene Virginica*). Pink family.

Max. ht. 2 ft.; gummy-hairy; flowers (scarlet) few; petals 5, 2-cleft; leaves lance-shaped. Woods. Summer. New York, South and West.

2. Leaves opposite, plant climbing.

TRUMPET HONEYSUCKLE (*Lonicera sempervirens*).
Honeysuckle family.

Climbing; flowers without stalks, in whorled clusters, red outside, yellow inside; corolla trumpet-shaped; stamens projecting; leaves oblong, lower with stalks, upper pairs confluent. Thickets. Spring to autumn.

II. LEAVES WHORLED.

3. Leaves whorled, flower solitary.

WAKE-ROBIN (*Trillium erectum*). Lily family.

Ht. abt. 1 ft.; flower large on stalk 1-3 in. long; 3 sepals; 3 petals; leaves (3) whorled, almost without stalks. Rich woods. Spring.

WOOD LILY (*Lilium Philadelphicum*). Lily family.

Max. ht. 3 ft.; flower at top of stem, large, with six sepals, red, purple-spotted inside, long-clawed; stamens 6; leaves 4-6 in whorl. Dry ground. Summer. (See Colored Plate II).

TRILLIUM SESSILE. Lily family.

Similar but flowers without stalks. Moist woods. Penn., South and West.

4. Leaves whorled, flowers not solitary.

TURK'S-CAP LILY (*Lilium superbum*). Lily family.

Ht. several ft.; flowers (3 in. long) often many in cluster, drooping, sepals 6, curved back; stamens 6; leaves whorled, lance-shaped, pointed. Rich ground.

III. LEAVES NOT OPPOSITE OR WHORLED.

5. Leaves otherwise than opposite or whorled, stems hairy.

RED CLOVER (*Trifolium pratense*). Pulse family.

Max. ht. 2 ft.; hairy; flowers papilionaceous in globular or egg-shaped head at end of long stalk; leaflets (3) soft, inversely egg-shaped, sometimes notched at end and with pale spot above. Open places. Spring–autumn.

PAINTED-CUP (*Castilleja coccinea*). Figwort family.

Max. ht. 1 ft.; hairy; flowers small, yellow; corolla 2-lipped; root-leaves mostly without teeth, oblong; stem-leaves deeply cut, *leaves scarlet at top*. Low ground. Spring, summer.

DEVIL'S PAINT-BRUSH (*Hieracium aurantiacum*). Composite family.

Low plant, heads small, clustered; flowers strap-shaped; *leaves all near base of plant*. Roadsides and fields. Summer and early autumn.

HOUND'S-TONGUE (*Cynoglossum officinale*). Borage family.

Max. ht. 4 ft.; coarse herb, strong scented; *flowers in racemes*; calyx 5-parted; corolla salver-form, 5-lobed; leaves, upper without stalks, lower with stalks. Waste ground. All summer.

BUTTERFLY-WEED (*Asclepias tuberosa*). Milkweed family.

Max. ht. 2 ft.; leafy, branched at top and bearing many-flowered umbels at top; corolla with 5 divisions bent downward; above the corolla a crown (corona) of 5 upright "hoods" of deep-orange color; leaves linear to lance-shaped, almost without stalks. Dry fields. All summer.

6. Leaves otherwise than opposite or whorled, stems not hairy.

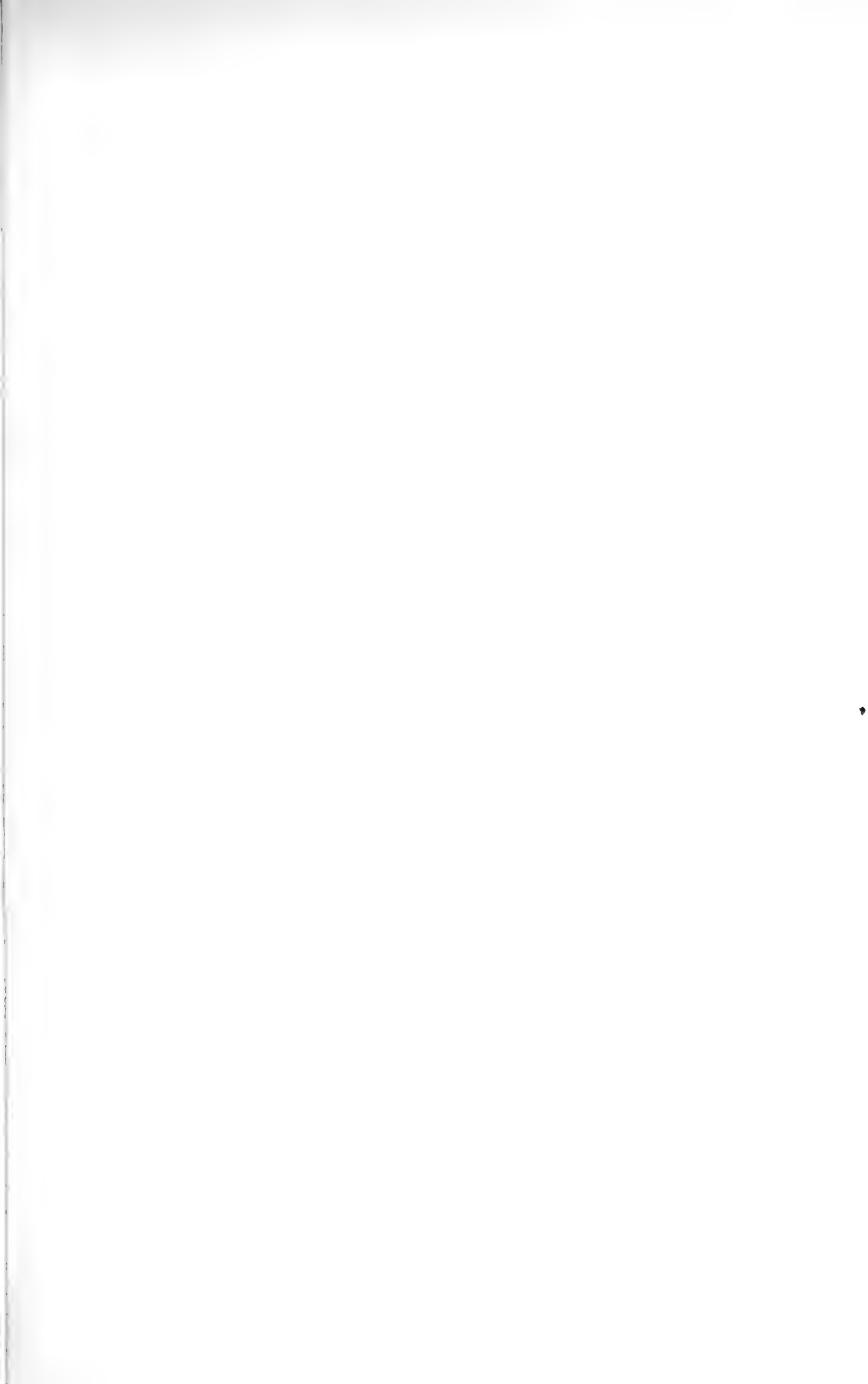
WILD COLUMBINE (*Aquilegia Canadensis*). Crowfoot fam.
Ht. 1-2 ft.; branched, with large and showy flowers ending the branches; sepals 5, resembling petals; petals 5, yellow inside with short tip prolonged into long hollow spurs; pistils 5; *leaves 2-3 times compound*. Rocks. Common. Early spring, summer.

SHEEP SORREL (*Rumex Acetosella*). Buckwheat family.
A weed with small flowers in long slender spikes; *leaves halberd-shaped*. A common weed in fields. Spring-autumn.

PITCHER-PLANT (*Sarracenia purpurea*). Pitcher-plant family.
Ht. abt. 1 ft.; *leafless stem bearing one large nodding flower*; sepals 5; petals 5, bent over inwards; leaves hollow, pitcher-shaped, from base only. Bogs. Early summer. (See Colored Plate I).

CARDINAL-FLOWER (*Lobelia cardinalis*). Lobelia family.
Max. ht. 4 ft.; flowers axillary or in *long, terminal raceme*; calyx 5-cleft with short tube; *corolla 2-lipped*; leaves oblong to lance-shaped, slightly toothed. Low ground. Common. Summer.

PINK AND ROSE-COLORED
FLOWERS



COLORS

follow out to right. When a number in parentheses indicates the group desired)

ed (1) [fl. in umbel (2) [4 petals (3)
otherwise— [6 petals (4)
otherwise (5)

ted, or climbing (6)

[fl. in spike (7)
fl. in cluster— [5 petals (8)
otherwise (9)
otherwise— [fl. tubular (10)
fl. otherwise (11)

[fl. in spike (16)
fl. in raceme— [not over 1 foot (17)
over 1 foot (18)
fl. in cluster— [fl. Composite fam. (19) [lvs. simple (20)
fl. simple [lvs. compound (21)
fl. in head (22)
fl. otherwise— [fl. small (23) [pl. not over 1 foot (24)
fl. large [pl. over 1 foot (25)



PINK AND ROSE-COLORED FLOWERS

I. LEAVES OPPOSITE.

1. Leaves opposite, stems hairy or downy, corolla 2-lipped.

BASIL (*Calamintha Clinopodium*). Mint family.

Max. ht. 2 ft.; flowers small in small close leafy clusters; corolla 2-lipped, upper lip with or without notches, lower notched; leaves small, narrowly oval, practically without teeth. Open ground and at edge of woods. Summer.

HEMP NETTLE (*Galeopsis Tetrahit*). Mint family.

Max. ht. 3 ft.; with spreading branches, *stem enlarged at the joints*; flowers small in axillary whorls, calyx bell-shaped with 5 teeth; corolla 2-lipped, lower lip notched; leaves egg-shaped, pointed, *coarsely toothed*. Waste places. Common. Late summer.

Fig. 56.



Hemp nettle (*Galeopsis Tetrahit*).

2. Leaves opposite, stem hairy or downy, not with 2-lipped corolla, flowers in umbel.

MILKWEED (*Asclepias Cornuti*). Milkweed family.

Max. ht. 5 ft.; stout stem finely hairy, juice milky; flowers in terminal or lateral clusters; calyx and

corolla 5-parted, divisions of corolla bent downward, and above them a crown (corona) of upright "hoods"; leaves oval to oblong (several in. long), pale, short-stalked. Rich ground. Summer.

PURPLE MILKWEED (*Asclepias purpurascens*). Milkweed family.

Max. ht. 4 ft.; stem stout; flowers similar to above; leaves egg-shaped to oblong, *downy beneath*, short-stalked. Dry ground. Early summer.

SWAMP MILKWEED (*Asclepias incarnata*). Milkweed family.

Max. ht. 4 ft.; flowers similar to above; leaves oblong to lance-shaped, acutely pointed. Swamps. Common. Summer. (See Colored Plate I).

3. Leaves opposite, stem hairy or downy, not with 2-lipped corolla, flowers not in umbel, 4 petals.

MEADOW BEAUTY (*Rhexia Virginica*). Malastoma family.

Ht. 1 ft. or over; stem 4-sided; *large, showy flowers*; calyx urn-shaped, 4-pointed; petals 4, stamens 8; leaves lance-shaped without stalks, toothed, pointed. Fields and marshes. Summer. (See Colored Plate I).

See also PURPLE-LEAVED WILLOW-HERB (II).

4. Same as 3, but 6 petals.

PURPLE LOOSESTRIFE (*Lythrum Salicaria*). Loosestrife family.

Max. ht. 3 ft.; downy, slender; flowers large, closely whorled in spike; petals generally 6; leaves mostly *without stalks*, lance-shaped, sometimes in whorls of 3. Swamps, etc. Early summer.

WAX-WEED (*Cuphea viscosissima*). Loosestrife family.

Max. ht. 1½ ft.; gummy; flowers solitary or racemed, on stalks; *calyx somewhat inflated and with spur*, 6 teeth; petals 6, unequal, with *short stalks*; leaves egg-shaped to lance-shaped. Fields. Summer, autumn. Rhode Island, West and South.

5. Same as 3, but otherwise than 4 or 6 petals.

HERB ROBERT (*Geranium Robertianum*). Geranium fam.
Max. ht. $1\frac{1}{2}$ ft.; hairy, strong-scented; stems
branching; 1-3 small flowers on stalk; sepals 5;
petals 5; *leaves palmately 3-divided*, sometimes
5-divided, the divisions irregularly cut. Woods
and shady places. Spring, autumn.

DEPTFORD PINK (*Dianthus Armeria*). Pink family.
Max. ht. $1\frac{1}{2}$ ft.; flowers small, terminal; petals 5;
leaves long and slender, hairy. Fields and side of
road. Summer.

WILD PINK (*Silene Pennsylvanica*). Pink family.
Ht. several in.; flowers in clusters; petals 5,
wedge-shaped; stem-leaves lance-shaped; *basal
leaves spoon-shaped*, with hairy stalks. Dry ground.
Spring and early summer.

MOSS PINK (*Phlox subulata*). Polemonium family.
In broad mats; few-flowered clusters at end of stems;
calyx teeth fine, stiff; corolla salver-formed with long
tube, lobes generally notched; *leaves lance-shaped or
linear*, closely set. Dry hills. Spring. New York,
South and West.

Fig. 57.



Twin-flower (*Linnaea borealis*).

TWIN-FLOWER (*Linnaea borealis*). Honeysuckle family.
Delicate, prostrate; flowers (fragrant) 2 together
on branches of slender stalk; corolla bell-shaped,

5-pointed; stamens 4; leaves *round* with wavy edges and with short stalks. Damp woods. Early summer.

RAGGED ROBIN (*Lychnis Flos-cuculi*). Pink family.

Ht. 1-2 ft.; flowers several in umbellate clusters, terminal; *petals* (5) *divided into 4 narrow lobes*; leaves narrowly lance-shaped. Damp ground. Summer.

See also WILD GERANIUM (Purple 6).

6. Leaves opposite, stem not hairy or downy, plant creeping, matted or climbing.

CLIMBING HEMP-WEED (*Mikania scandens*). Composite family.

Climbing on bushes; flowers tubular, small, flower-heads in clusters; leaves heart-shaped, toothed, with stalks. Thickets on streams. Summer.

7. Leaves opposite, stem not hairy or downy, upright, flowers in spike.

OBEDIENT-PLANT (*Physostegia Virginiana*). Mint family.

Av. ht. 2-3 ft.; stem square, stout, ending in spike of *large flowers* which remain where placed when bent from side to side, as if on hinge; calyx 5-toothed, corolla funnel-form, 2-lipped, upper lip concave, lower 3-lobed; leaves *thick, without stalks*, lance-shaped to oblong, mostly toothed. Summer.

LOPSEED (*Phryma Leptostachya*). Mint family.

Max. ht. 3 ft.; small flowers in delicate spike at end of branches; calyx cylindrical, 2-lipped; corolla 2-lipped; stigma double; leaves *thin*, toothed, oval, *lower with long stalks*. Moist woods. Summer.

8. Leaves opposite, stem not hairy or downy, upright, flowers in cluster, 5 petals.

SPRING BEAUTY (*Claytonia Virginica*). Purslane family.

Ht. under 1 ft.; stem weak; flowers in open cluster; sepals 2; leaves (2) linear to lance-shaped. Open woods. Common. Spring.

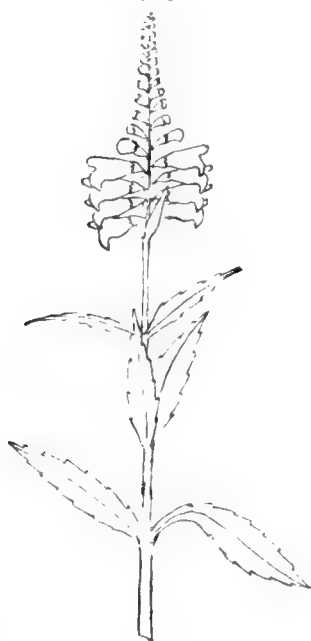
MARSH ST. JOHN'S WORT (*Elodes campanulata*). St. John's Wort family.

Ht. 1 ft. or over; flowers in small clusters, *axillary and terminal*; petals oblong; leaves without stalks, *sometimes clasping*. Swamps. Summer.

BOUNCING BET (*Saponaria officinalis*). Pink family.

Tall and stout herb with large flowers, terminal; *petals long, slender and clawed*; leaves pointed, egg-shaped to lance-shaped. Roadsides, etc. Summer.

Fig. 58.



Obedient-plant (*Physostegia Virginiana*).

9. Same as 8, but not with 5 petals.

PALE LAUREL (*Kalmia glauca*). Heath family.

Ht. 1 ft.; shrub; flowers few in corymb at end of stem (each about $\frac{1}{2}$ in. broad); calyx 5-parted, *corolla wheel-shaped, 5-lobed*; leaves *nearly without stalks*, oblong, whitish beneath with edges rolled back. Bogs and low mountains. Spring, early summer.

INDIAN CURRANT (*Symphoricarpos vulgaris*). Honey-suckle family.

Shrub, max. ht. 5 ft.; stems upright; flowers small, bell-shaped, hairy inside, in close axillary clusters, practically without stalks; leaves oval, not toothed, blunt-pointed, short-stalked. Summer. New Jersey, South and West.

SPREADING DOGBANE (*Apocynum androsaemifolium*). Dogbane family.

Ht. few ft.; branching; flowers in loose spreading cymes with short stalks; corolla bell-shaped with (5) lobes rolled back; leaves egg-shaped, with stalks, pointed. Roadsides. Common. Early summer.

Fig. 59.



Spreading dogbane (*Apocynum androsaemifolium*).

SWAMP VALERIAN (*Valeriana sylvatica*). Valerian family.

Ht. 1-2 ft. or over; flowers in terminal cluster; corolla somewhat bell-shaped, 5-lobed; leaves of 5-11 leaflets, lance-shaped, sparsely toothed. Damp ground. Early summer.

See also MOTHERWORT (Purple 4), and TURTLEHEAD (White 7).

10. Leaves opposite, stem not hairy or downy, upright, flowers not in cluster, flowers tubular.

PURPLE GERARDIA (*Gerardia purpurea*). Figwort family.

Ht. 1–few ft.; branches spreading; flowers (1 in. long) on single-flowered stalks from axils; calyx bell-shaped, corolla tubular, 5-lobed; leaves long and narrow. Low ground. Late summer and autumn.

SEASIDE GERARDIA (*Gerardia maritima*). Figwort family.

Ht. generally under 1 ft.; flowers like above but smaller; branches shorter; leaves thick. Near coast. Summer.

Fig. 60.



Seaside gerardia (*Gerardia maritima*).

SLENDER GERARDIA (*Gerardia tenuifolia*). Figwort family.

Similar to *Gerardia maritima*, but taller; leaves very narrowly linear and sharp pointed. Dry ground. Common. Late summer and autumn.

11. Same as 10, but flowers not tubular.

SPIKED CENTAURY (*Erythraea spicata*). Gentian family.

Ht. $\frac{1}{2}$ –1 ft. or over; flowers one or two in axils, generally with flower-stalks; corolla 5-lobed;

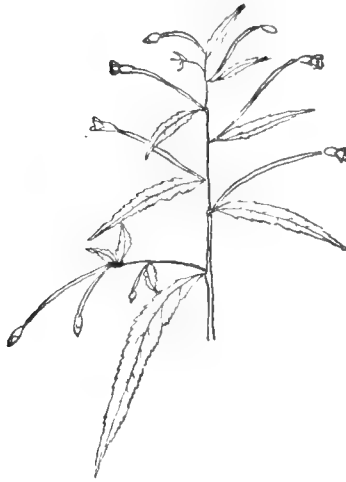
leaves small, oblong, without stalks. Spring, summer. Coast. Nantucket and Portsmouth, Va.

PURPLE-LEAVED WILLOW-HERB (*Epilobium coloratum*).

Evening Primrose family.

Max. ht. 3 ft.; flowers pendulous at end of stalks, growing from axils; petals 4; leaves partly opposite, lance-shaped, toothed, narrowed to short stalks. Wet ground. Summer.

Fig. 61.



Purple-leaved willow-herb (*Epilobium coloratum*).

SEA PINK (*Sabbatia stellaris*). Pink family.

Ht. $\frac{1}{2}$ –2 ft.; large flowers on separate spreading stalks; calyx with long pointed lobes; corolla with 5 divisions and with yellow centre; leaves almost linear. Coast. Summer, autumn.

LARGE MARSH PINK (*Sabbatia chloroides*). Pink family.

Max. ht. 2 ft.; flowers large (2 in. and larger); corolla with numerous divisions, broad at end; leaves narrow and pointed. Near coast. Summer, autumn.

SQUARE-STEMMED SABBATIA (*Sabbatia angularis*). Pink family.

Max. ht. 3 ft.; stem 4-angled, flowers similar to above; leaves broader and clasping. Rich ground. Summer. New York.

See also WILD BERGAMOT (Purple 2).

II. LEAVES WHORLED.

12. Leaves whorled, flowers all terminal.

FOUR-LEAVED MILKWEED (*Asclepias quadrifolia*). Milkweed family.

Ht. 1-2 ft.; flowers in several umbels; corolla 5-parted, divisions bent down, above them a crown (corona) of upright "hoods"; leaves in middle four in whorl, above and below (2) opposite. Woods. Spring, summer.

MARSH MILKWORT (*Polygala cruciata*). Milkwort family.

Max. ht. 10 in.; branches opposite; stem 4-angled; flowers in short spikes; petals 3, middle keel-shaped; leaves generally in fours, linear to inversely lance-shaped. Swamps. Summer, autumn.

JOE PYE WEED. TRUMPET-WEED (*Eupatorium purpureum*). Composite family.

Ht. 2-8 ft. or over; stout; stem spotted; flower-heads in flat-topped clusters (corymbs) at top; leaves 3-6 in whorl, oblong, lance-shaped, coarse, and toothed. Low ground. Common. End of summer.

See also PURPLE LOOSESTRIFE (4).

13. Leaves whorled, flowers lateral.

SHEEP-LAUREL (*Kalmia angustifolia*). Heath family.

Max. ht. 3 ft.; shrub; flowers clustered at side of stem; corolla saucer-shaped, 5-lobed, stamens (10)

sometimes adherent at tip to corolla; leaves generally in 3's, pale, somewhat lance-shaped, blunt pointed. Hillsides. Spring, early summer.

Fig. 62.



Joe Pye weed (*Eupatorium purpureum*).

III. LEAVES NOT OPPOSITE OR WHORLED.

14. Leaves otherwise than opposite or whorled, plant trailing, creeping or spreading.

TRAILING ARBUTUS (*Epigaea repens*). Heath family.
Stem hairy; flowers clustered in axils, very fragrant; leaves egg-shaped to oblong, on slender stalks. Sandy and rocky places, particularly under pine trees. Early spring.

CRANBERRY (*Vaccinium macrocarpon*). Heath family.
Stems long and slender; flower pendulous; *corolla*
4-parted; leaves oval, blunt. Bogs. Early summer.

WILD MORNING GLORY (*Convolvulus Americanus*). Con-
volvulus family.
Climbing plant with large *bell-shaped flowers* and
broadly arrow-shaped leaves. Common. Early
summer.

CLIMBING FUMITORY (*Adlumia cirrhosa*). Fumitory
family.
Climbing on bushes, foliage delicate, flowers pen-
dulous, clustered; sepals 2; *corolla closed*; leaves
three times pinnately compound, leaflets lobed.
Damp woods. Early summer-autumn.

BUSH CLOVER (*Lespedeza procumbens*). Pulse family.
Slender, on the ground; flower-stalks several-
flowered, *papilionaceous*; clustered; leaves with
three leaflets. Late summer.

SMALL CRANBERRY (*Vaccinium oxycoccus*). Heath family.
Creeping plant with delicate stems; 4-5 pointed
petals; anthers forming a projecting cone; leaves
small, egg-shaped, evergreen, thick. Bogs. Spring,
summer.

See also CLIMBING FALSE BUCKWHEAT (White 44).

15. Leaves otherwise than opposite or whorled, upright shrub.

PINK AZALIA. WILD HONEYSUCKLE (*Rhododendron mu-
diflorum*). Heath family.
Max. ht. 6 ft.; *flowers large* in umbelled clusters;
corolla with tube; stamens and style long; flowers
appearing early; *leaves downy beneath*. Swamps.
Early spring.

RHODODENDRON RHODORA. Heath family.
Max. ht. 2 ft.; flowers large and handsome in
terminal clusters; corolla (1 in. long), 5-lobed,
pink tipped; leaves oblong, not toothed. Bogs.
Spring, early summer.

PURPLE-FLOWERING RASPBERRY (*Rubus odoratus*).

Rose family.

Max. ht. 5 ft.; *clammy hairs* on young branches and calyx; flowers on stalks; flowers (2 in. across) with 5 broad petals; leaves broad with 3-5 lobes; toothed, middle lobe long. Dry rocky ground. Early summer.

WILD ROSE. SWEETBRIER (*Rosa rubiginosa*). Rose family.

Max. ht. 6 ft.; stem with prickles, bent backwards; flowers on short stalks, five broad petals; leaves of 5-7 leaflets, rounded, *doubly toothed*. Common. Early summer.

DOG ROSE (*Rosa canina*). Rose family.

Similar, but leaflets singly toothed.

SWAMP ROSE (*Rosa Carolina*). Rose family.

Max. ht. 7 ft.; bushy, *thorns hooked*; leaflets 5-9, rather long stalks, sharply toothed. Fruit spherical.

SMOOTH ROSE (*Rosa blanda*). Rose family.

Max. ht. 4 ft.; practically without thorns; leaflets 5-7, with *short* stalks. Fruit spherical or pear-shaped.

DWARF WILD ROSE (*Rosa lucida*). Rose family.

Low; leaflets 3-7, with coarse teeth; *thorns wide at base, almost straight*. Fruit hairy.

STEEPLE-BUSH. HARDHACK (*Spiraea tomentosa*). Rose family.

Max. ht. 4 ft.; erect; *stem woolly*; flowers small in pointed clusters at end of stem; calyx 5-cleft; petals 5; leaves egg-shaped-oval, toothed. Low grounds. Summer.

See also MOUNTAIN LAUREL (White 54) and GREAT LAUREL (White 53).

16. Leaves otherwise than opposite or whorled, upright herb,
flowers in spike.

SHOWY ORCHIS (*Orchis spectabilis*). Orchis family.

Ht. several in.; leafless stem square; flowers 2-lipped, upper lip pink, lower white; leaves (2) from root, long and shiny (bracts on stem resembling leaves). Woods. Summer.

AMPHIBIOUS KNOTWEED. (*Polygonum amphibium*).

Buckwheat family.

Stout, growing in water; spike (at end of stem) sometimes 1 in. long; flowers small, rose-colored; 5 divisions of calyx resembling petals; stamens 5; style projecting; leaves usually thick, generally with long stalks, oblong. Ponds. Summer.

HAIRY BUSH CLOVER (*Lespedeza polystachya*). Pulse family.

Max. ht. 4 ft.; stem soft-hairy; spikes short and thick, flowers small, papilionaceous, with purple spot on upper petal (standard); leaflets (3) rounded, without teeth. Dry ground. Late summer and autumn. Common.

PINK KNOTWEED (*Polygonum Pennsylvanicum*). Buckwheat family.

Max. ht. 4 ft.; branching, enlarged at joints; flowers small in dense spikes sometimes over 1 in. long; 5 divisions of calyx resembling petals; leaves lance-shaped; long pointed. Moist ground. Late summer and early autumn.

LADY'S THUMB (*Polygonum Persicaria*). Buckwheat family.

Ht. 2 ft. or under, similar to above; leaves often with dark spot in middle. Early summer-autumn. (Called Hearts-ease in some localities.)

See also PURPLE FRINGED ORCHIS (Purple 24).

17. Leaves otherwise than opposite or whorled, upright herb, flowers in raceme, plant not over 1 ft.

THREAD-LEAVED SUNDEW (*Drosera filiformis*). Sundew family.

Av. ht. 1 ft.; delicate raceme of small flowers with 5 petals, 5 stamens and 3 styles; leaves (from base only) very long and thread-like, covered with bristles. In sand on coast. Summer.

POLYGALA POLYGAMA. Milkwort family.

Ht. abt. 8 in.; many stems, many leaves, loose racemes at end of stems; sepals 5, petals 3, lower keel-shaped; *leaves inversely lance-shaped to oblong*. Sandy places. Summer.

SAND KNOTWEED (*Polygonella articulata*). Buckwheat family.

Ht. under 1 ft.; branching; flowers small, pendulous, in delicate raceme on jointed stalks; 5 divisions of calyx, resembling petals; no corolla; stamens 8; styles 3; *leaves linear*. Dry ground. Late summer and early autumn.

See also DUTCHMAN'S BREECHES (White 24).

18. Same as 17, but plant over 1 ft.

FIRE-WEED (*Epilobium angustifolium*). Evening Primrose family.

Ht. 2 to 6 ft. or over; flowers large in showy raceme; *petals* 4; stamens 8; stigma 4-divided; leaves almost without stems, resembling willow leaves, edges almost smooth; pod linear. Low ground, especially recently burnt over. Early summer, autumn.

TICK-TREFOIL (*Desmodium Canadense*). Pulse family.

Ht. 1-several ft.; *stem hairy*; flowers papilionaceous, showy (about $\frac{1}{2}$ in. long), in raceme; calyx 2-lipped; leaves with 3 *leaflets*, leaflets lance-shaped to oblong, blunt; pods jointed, 2-3 in. long. Woods. Summer.

TICK-TREFOIL (*Desmodium nudiflorum*). Pulse family.

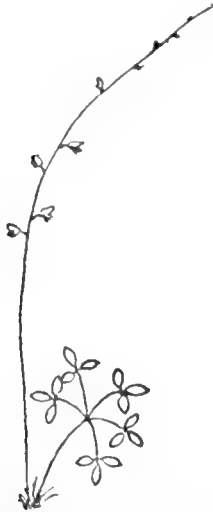
Ht. of *leafless flowering stem* about 2 ft.; *flowers* similar to above but *smaller* in long raceme; *leaves crowded at top of separate stem*, leaflets (3) broadly egg-shaped, whitish beneath. Woods. Common. Summer.

TICK-TREFOIL (*Desmodium acuminatum*). Pulse family.

Similar to above, but *leaves all crowded at the end of the stem from which arises the long raceme*; leaves broadly egg-shaped, pointed, unless a rounded end one. Early summer-autumn.

TICK-TREFOIL (*Desmodium Dellenii*). Pulse family.
 Ht. 2-3 ft.; stem hairy; flowers similar to above, middle-sized; leaflets (3), oblong, pale beneath (2-3 in. long). Open woody places. Common. Early summer-autumn.

Fig. 63.



Tick-trefoil (*Desmodium nudiflorum*).

19. Leaves otherwise than opposite or whorled, upright herb, flowers in cluster, composite.

PHILADELPHIA FLEABANE (*Erigeron Philadelphicus*).
 Composite family.

Av. ht. 2 ft.; hairy; number of flower-heads resembling small daisies; disk yellow, rays many, narrow; leaves with broad midrib, oblong, upper clasping and mostly without teeth, lowest with teeth. Moist ground. Common. Summer.

SALT-MARSH FLEABANE (*Pluchea camphorata*). Com-
 posite family.

Max. ht. 3 ft.; heads in terminal and axillary clusters; long-stalked; flowers tubular; leaves almost without stems, sharply toothed. Low ground. Late summer, autumn.

See also YARROW, which is occasionally pink (White 38).

20. Leaves otherwise than opposite or whorled, upright herb, flowers (not composite) in cluster, leaves simple.

CALOPOGON PULCHELLUS. Orchis family.

Ht. abt. 1 ft.; flowers several, in terminal cluster; *lip bearded* near broadened top; single leaf linear, springing from base. Bogs. Early summer.

ROSE MALLOW (*Hibiscus Moscheutos*). Mallow family.

Ht. 6 ft. or over, stout; flowers large, clustered at end of stems; sepals 5; petals 5; leaves pointed, toothed, lower lobed, upper lance-shaped to oblong. Marshes near coast and waste places on shores. Late summer.

21. Same as 20, but leaves compound.

PALE CORYDALIS (*Corydalis glauca*). Fumitory family.

Max. ht. 2 ft., branching; flowers loosely clustered, *pink with yellow tips*; sepals 2; *corolla with spur*; 2 pairs of petals; leaflets delicate, their final divisions round-wedge-shaped. Rocky places. Early spring to autumn.

BUSH CLOVER (*Lespedeza reticulata*). Pulse family.

Av. ht. 2 ft.; stout, erect, very leafy; flowers *small, papilionaceous*, clustered on short stalks in axils; leaflets (3) thick, linear to oblong, finely hairy. Summer and autumn.

22. Leaves otherwise than opposite or whorled, upright herb, flowers in head.

ALSATIAN CLOVER (*Trifolium hybridum*). Pulse family.

Max. ht. 2 ft.; flowers rose-pink, in spherical heads on long stalks, papilionaceous, becoming bent back and separate; leaves inversely egg-shaped. Waste places. Spring-autumn.

MILKWORT (*Polygala sanguinea*). Milkwort family.

Ht. under 1 ft.; heads spherical to oblong, densely covered with small flowers; sepals 5; petals 3, lowest keel-shaped; leaves simple, not toothed, linear to oblong. Sandy and damp ground. Early summer-autumn.

RABBIT-FOOT CLOVER (*Trifolium arvense*). Pulse family.
Ht. under 1 ft.; flowers in oblong heads, fuzzy,
pinkish gray; leaves of 3 leaflets, long, narrow.
Dry fields. Summer.

Fig. 64.



Rabbit-foot clover (*Trifolium arvense*).

23. Leaves otherwise than opposite or whorled, upright herb, flowers not in spike, raceme, cluster or head, flowers small.

TWISTED-STALK (*Streptopus roseus*). Lily family.
Ht. abt. 1½ ft.; stem stout, branches with short hairs; flowers *axillary*, small, bell-shaped, generally solitary, *pendulous*, on slender stalks twisted near middle; leaves egg-shaped, pointed, clasping. Woods. Spring.

ARETHUSA (*Arethusa bulbosa*). Orchis family.
Ht. abt. 9 in.; leafless stem growing from bulb and bearing a single *erect flower* ½ in. long *with bearded lip*; petals and sepals nearly alike, lance-shaped; a single linear leaf. Bogs. Early summer.

PURPLE-LEAVED WILLOW-HERB (*Epilobium coloratum*).
Evening Primrose family.
Max. ht. 3 ft.; flowers *pendulous* at end of stalks, growing from axils; *petals* 4; leaves partly opposite, lance-shaped, with teeth, narrowed to short stalks. Wet ground. Summer.

GREAT HAIRY WILLOW-HERB (*Epilobium hirsutum*).
Evening Primrose family.

Av. ht. 3 or 4 ft.; stout, branching; *flowers small* in upper axils (or in short leafy racemes), each flower on long calyx which becomes a pod; *petals* 4; stamens 8; leaves *partly* opposite, lance-shaped to oblong without stalks, with teeth. Waste ground. Early summer-autumn.

Fig. 65.



Arethusa (*Arethusa bulbosa*).

24. Leaves otherwise than opposite or whorled, upright herb,
flowers not in spike, raceme, cluster, or head,
flowers large, plant not over 1 ft.

CALYPSO (*Calypso borealis*). Orchis family.

Ht. abt. 4 in.; flower solitary, large and showy lip somewhat like Lady's Slipper; *leaf single*, sheathing the flowering stalk. Bogs and damp woods. Spring.

PINK LADY'S SLIPPER (*Cypripedium acaule*). Orchis family.

Ht. abt. 10 in.; flower solitary; sepals 3, pointed, lip a pendulous pouch; leaves (2) *from base only*, oblong, large, sheathing at base. Spring, early summer.

FRINGED POLYGALA (*Polygala paucifolia*). Milkwort family.

Ht. few inches; flowers 1-3, large; sepals 5, 2 petal-like; petals 3, lower with fringe; leaves, lower insignificant, several larger at top of stem. Light soil. Spring.

ADDER'S MOUTH (*Pogonia ophioglossoides*). Orchis family.

Max. ht. 10 in.; flower dainty and fragrant, 1 in. long, at end of stem (occasionally more than one); flowers irregular with tongue bearded; a leaf near the middle, not toothed, and a small one or bract near the flower (sometimes more). Bogs. Early summer.

Fig. 66.



Adder's mouth (*Pogonia ophioglossoides*).

25. Same as 24, but plant over 1 ft.

SHOWY LADY'S SLIPPER (*Cypripedium spectabile*).
Orchis family.

Av. ht. 2 ft.; downy; flowers solitary, showy (1½ in. long), lower lip pink in form of pouch; leaves sheathing base, egg-shaped, pointed. Bogs. Summer.



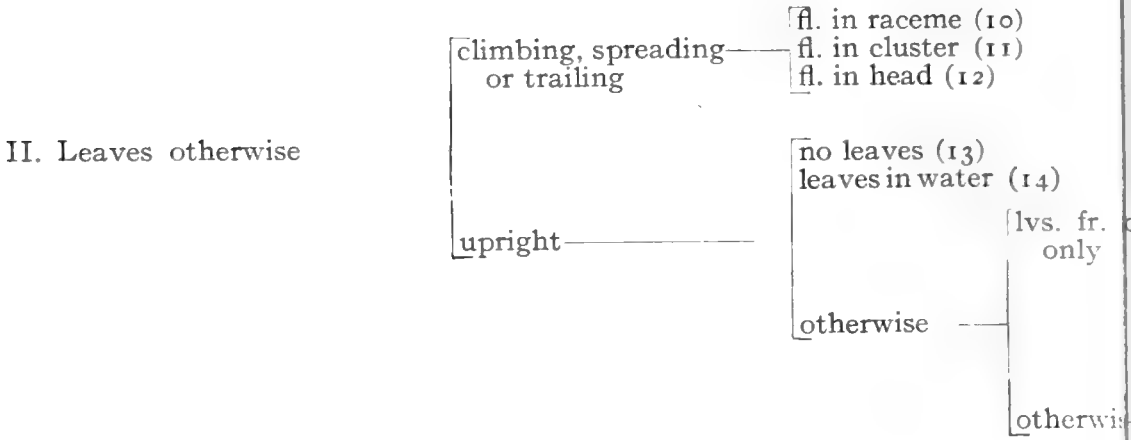
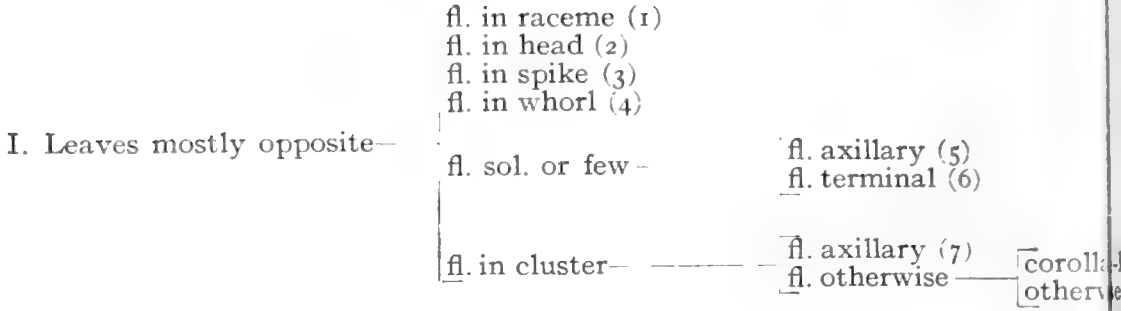
LAVENDER TO PURPLE FLOWERS





LAVENDER TO US

(First, see whether plant falls in Class I or II; the number reached, this number



PURPLE FLOWERS

Follow out to right. When a number in parentheses indicates the group desired)

lipped (8)
 (9)

violet-shaped (15)	fl. solitary (16)
otherwise	otherwise (17)

lvs. divided or deeply cut	5 petals (18)
	otherwise (19)

	fl. of Composite family
--	----------------------------

otherwise

otherwise

	yellow centre (20)
	otherwise (21)

	fl. in cluster
	fl. in spike (24)
	fl. in raceme (25)
	otherwise (26)

	5 petals (22)
	otherwise (23)

LAVENDER TO PURPLE FLOWERS

I. LEAVES MOSTLY OPPOSITE.

1. Leaves mostly opposite, flowers in raceme.

HEART-LEAVED TWAYBLADE (*Listera cordata*). Orchis family.

Low, slender, single stem; flowers purple, minute, in terminal raceme; leaves two, heart-shaped, without stalks. Wet woods. Early summer.

2. Leaves mostly opposite, flowers in head.

WILD BERGAMOT (*Monarda fistulosa*). Mint family.

Ht. gen. 3-4 ft.; stem square; flowers purplish-pink in large terminal head; calyx hairy inside; corolla (1 in. long or more) 2-lipped; *stamens protruding*; leaves broadly lance-shaped. Dry soil. All summer. Common in West. See illustration of Oswego Tea (Red 1).

See also SELF-HEAL (3).

3. Leaves mostly opposite, flowers in spike.

WILD MARJORAM (*Origanum vulgare*). Mint family.

Max. ht. 2½ ft.; flowers 2-lipped, in spikes *with purplish bracts*; leaves round-egg-shaped, with stalks. Roadsides. Early summer-autumn.

BLUE VERVAIN (*Verbena hastata*). Vervain family.

Ht. several ft.; stem square; *slender spikes* terminal and axillary, thickly flowered, erect; flowers purple, *small, few blossoming at once*; calyx 5-pointed; corolla salver-form with 5-cleft border; leaves long pointed, toothed, with stalks, lower often lobed. Waste places. Common. Early summer-autumn.

SPEARMINT (*Mentha viridis*). Mint family.

Max. ht. 18 in.; stem square; flowers (light purple) in slender, dense, continuous spike; flowers small, corolla bell-shaped, 4-cleft; leaves without stalks, oblong to lance-shape, unevenly toothed. Wet places. Summer-autumn.

Fig. 67.



Blue vervain (*Verbena hastata*).

PEPPERMINT (*Mentha piperita*). Mint family.

Max. ht. 3 ft.; stem square; flowers similar to above but spikes not continuous; leaves with stalks. An escape. Summer-autumn.

SELF-HEAL (*Brunella vulgaris*). Mint family.

Low plant with square stem; flowers purplish in thick oblong spike or head at end of stem; calyx and corolla 2-lipped; leaves with stalks, oblong, sometimes toothed. Fields. Common. All summer.

Fig. 68.



Self-heal (*Brunella vulgaris*).

EYEBRIGHT (*Euphrasia officinalis*). Figwort family.

Max. ht. 10 in.; flowers very light purple, small, in close, short spikes; corolla 2 lipped; leaves without stalks, short and broad, with coarse teeth. Maine and Canada. Summer.

OBEDIENT-PLANT (*Physostegia Virginiana*). Mint family.

Av. ht. 2-3 ft.; stem square, stout, ending in spike of large purplish-pink flowers which remain where placed when bent from side to side, as if on hinge; calyx 5-toothed; corolla funnel-form, 2-lipped, upper lip concave, lower 3-lobed; leaves thick, without stalks, lance-shaped to oblong, mostly toothed. Summer. (See illustration under Pink 7).

4. Leaves mostly opposite, flowers in whorl.

INNOCENCE (*Collinsia verna*). Figwort family.

Ht. $\frac{1}{2}$ – $1\frac{1}{2}$ ft.; flowers on *long stalks*, about 6, apparently whorled in axils; calyx 5-pointed; corolla 2-lipped, blue-purple-white; leaves egg-shaped-lance-shaped, some *clasping at base*, toothed. Moist ground. Early summer. New York and West.

PENNYROYAL (*Hedeoma pulegioides*). Mint family.

Low plant with sq. stem, branching, hairy, *odorous*; whorls (in axils) few-flowered: flowers small, purple; calyx and corolla 2-lipped; leaves egg-shaped to oblong, *with stalks*, somewhat toothed. Summer.

MOTHERWORT (*Leonurus Cardiaca*). Mint family.

Max. ht. 5 ft.; square, *stout*, erect stem; flowers small, whorled in axils; corolla 2-lipped, light purple; leaves with stalks, lower leaves with irregular lobes, upper with 3 pointed lobes. Waste places around dwellings. Summer.

WATER MINT (*Mentha aquatica*). Mint family.

Ht. $1\frac{1}{2}$ – $2\frac{1}{2}$ ft.; stem square, branching, *hairy* (downwards); flowers (purplish) in rounded whorls in *upper axils*; corolla 2-lipped; leaves egg-shaped, pointed, short stalked. Wet ground. Late summer, autumn.

5. Leaves mostly opposite, flowers solitary or few, axillary.

PURPLE VIRGIN'S BOWER (*Clematis verticillaris*). Crow-foot family.

A vine; flowers solitary in axils, rather large and showy with 4 *purple sepals*; leaves of 3 leaflets. Rocky and mountainous places. Spring.

BLUE CURLS (*Trichostema dichotomum*). Mint family.

Low plant with square stem; flowers purple, solitary, on long stalks, first at end, then at side in axils; corolla pink-purple; *stamens* 4, *protruding and curved*; leaves lance-shaped, short stalked. Sandy places. Summer and autumn.

MONKEY-FLOWER (*Mimulus ringens*). Figwort family.
Max. ht. 2 ft.; stem square; flowers (1 in. or longer) on long stalks; corolla violet, 2-lipped; stamens 4; leaves lance-shaped, pointed, clasping at base, toothed. Wet places. Common. Summer, autumn.

6. Same as 5, but flowers terminal.

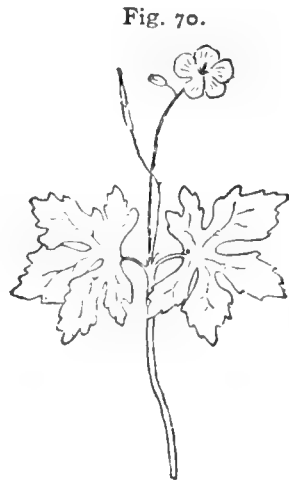
WILD GERANIUM. CRANE'S-BILL (*Geranium maculatum*). Geranium family.

Ht. 1-2 ft.; hairy; petals (5) light purplish pink ($\frac{1}{2}$ in.); flower-stalks branching, with 1-3 flowers; leaves deeply cleft into lobes which are deeply toothed and cut. Open places and woods. Early spring, summer.

See also BLUE CURLS (5).



Blue curls (*Trichostema dichotomum*.)



Crane's-bill (*Geranium maculatum*.)

CORN-COCKLE (*Lychnis Githago*). Pink family.

Ht. 1-3 ft.; with long, soft hairs; flowers large, red-purple, solitary, terminal, long-stalked; petals 5, pink-purple, broad; leaves long and pointed. Wheat fields. Early summer.

7. Leaves opposite, flowers in cluster, axillary.

WILD MINT (*Mentha Canadensis*). Mint family.

Ht. $\frac{1}{2}$ –2 ft.; odorous, stem square; flowers light purple, small, in spherical clusters; corolla with 4-cleft border; stamens 4; leaves broad, tapering at both ends. Wet places. Summer.

See also PENNYROYAL (4).

8. Leaves opposite, flowers in cluster, not axillary, corolla 2-lipped.

DITTANY (*Cunila Mariana*). Mint family.

Av. ht. 1 ft.; stems branching; flowers light purple, small, in open clusters, generally terminal; corolla 2-lipped; *stamens 2, projecting*; leaves egg-shaped, toothed, rounded at base, almost without stems. Dry hills. Late summer–autumn.

BEARD-TONGUE (*Pentstemon pubescens*). Figwort family.

Max. ht. 2 ft.; *viscid-hairy*; flowers loosely clustered along stem; corolla purplish, cylindrical, long, 2-lipped, *throat bearded*; leaves lance-shaped (2–4 in. long), lowest egg-shaped or oblong, usually finely toothed. Dry ground. Summer. Common southward.

9. Leaves opposite, flowers in cluster, not axillary, not 2-lipped.

WILD PHLOX (*Phlox divaricata*). Polemonium family.

Ht. abt. 1 ft.; flowers "pale lilac or bluish" (Gray), in open cluster at end; edge of corolla 5-parted; leaves oblong to lance-shaped, pointed (1½ in. long). Damp woods. Spring.

II. LEAVES NOT OPPOSITE.

10. Leaves not opposite; climbing or spreading, flowers in raceme.

BEACH PEA (*Lathyrus maritimus*). Pulse family.

Max. ht. 2 ft.; *stem stout*, grooved; flower-stalks bearing 6–10 flowers ($\frac{3}{4}$ in.), purple, papilionaceous; leaflets 6–10, thick, *stipules broad*. Seashore. Early summer.

VETCH (*Vicia sativa*). Pulse family.

Climbing by tendrils, somewhat hairy; flowers "purplish or pinkish" (Dana), mostly without stalks, large, papilionaceous; leaflets 5-7 pairs, inversely egg-shaped to linear, notched, stipules narrow. Fields. Spring, summer.

HOG PEANUT (*Amphicarpaea monoica*). Pulse family.

Stems delicate and twining about other plants; flowers small, light purple, papilionaceous, in short racemes; leaves with 3 thin leaflets. Rich woods. Common. Late summer, autumn.

11. Leaves not opposite, climbing or spreading, flowers in cluster.

MARSH VETCHLING (*Lathyrus palustris*). Pulse family.

Max. length of stem 3 ft.; stem slender, often winged; flower-stalks bearing 2-6 flowers, purple, papilionaceous ($\frac{1}{2}$ in.); leaflets 4-8, narrow. Moist places. Early summer.

NIGHTSHADE (*Solanum Dulcamara*). Nightshade family.

Climbing; flowers purple with yellow centre, in clusters; corolla 5-cleft; stamens (5) prominent; upper leaves with two ears at base. Moist banks. Early summer-autumn.

12. Same as 11, but flowers in head.

WILD BEAN (*Strophostyles angulosa*). Pulse family.

Trailing; max. length 6 ft.; flowers without stalks, clustered in heads on long stalks (peduncles), flowers "greenish purple" (Britton & Brown); leaves of 3 egg-shaped pointed leaflets. Sandy banks. Late summer and fall.

13. Plant upright, no leaves.

ONE-FLOWERED CANCER-ROOT (*Aphyllon uniflorum*).

Broomrape family.

No leaves, main stem underground or nearly so, short, scaly, with 1-3 slender branches, few in. high, each bearing one flower; calyx generally 5-parted, violet-colored; corolla (1 in. long) with a long tube, and 5-lobed border. Damp woods. Spring.

14. Plant upright, leaves in water.

WATER-SHIELD (*Brasenia peltata*). Water-lily family.

Leaves long-stalked, oval, floating, 1-4 in. across; flowers (purple) axillary, small; sepals 3-4; petals 3 or 4, linear; stamens numerous. Quiet water. Summer, autumn.

Fig. 71.

One-flowered cancer-root (*Aphyllon uniflorum*).

15. Plant upright, leaves from root only, flowers violet-shaped.

BLUE VIOLET (*Viola palmata*, var. *cucullata*). Violet family.

Low plant; leaves heart-shaped, wavy edges; leafless slender stalks bearing a single flower. Early spring.

16. Leaves from root only, upright plant, flowers (not violet-shaped) solitary.

FLEUR-DE-LIS (*Iris Germanica*). Iris family.

Max. ht. 3 ft.; stem stout, flower large and conspicuous, dark violet-blue, with variegated streaks; inner divisions of perianth arching; leaves, max. width 2 in., lower very long. Roadside. Spring, early summer. Virginia. (See Colored Plate II).

LARGER BLUE FLAG (*Iris versicolor*). Iris family.

Max. ht. 3 ft.; stem stout; flowers large, few, terminal, conspicuous, divisions of perianth *curved back*; leaves very long and narrow, ascending. Wet places. Spring, early summer.

HEPATIC A (*Hepatica triloba*). Crowfoot family.

Low plant; flowers light blue or purple on long hairy leafless stalks; numerous petal-like sepals; *leaves thick, broad, long stemmed, with three rounded lobes*. Woods. Early spring.

ARETHUSA (*Arethusa bulbosa*). Orchis family.

Ht. abt. 9 in.; leafless stem growing from bulb and bearing a single *erect flower* $\frac{1}{2}$ in. long *with bearded lip*; petals and sepals nearly alike, lance-shaped; a *single linear leaf*. Bogs. Early summer.

17. Same as 16, but flowers not solitary.

SWAMP PINK (*Helonias bullata*). Lily family.

Flowers purple, in compact racemes; perianth 6-divided; stamens 6; pistil 1, with *three-divided stigma*; leaves clustered, *long, parallel-veined*. Early spring. New York and South.

SHOOTING STAR (*Dodecatheon Meadia*). Primrose family.

Max. ht. 20 in.; flowers several in umbellate cluster, each with long stalk; corolla of 5 *long lobes bent backward*, stamens *forming a cone*; leaves somewhat lance-shaped, blunt-pointed. Woods. Spring. Penn., West and South.

VIOLET WOOD-SORREL (*Oxalis violacea*). Geranium family.

Ht. *several in.*; leafless stem bearing several flowers; flowers small, violet, petals 5; leaves of 3 *inversely egg-shaped leaflets*. Rocky grounds and woods. Spring, early summer.

SEA-LAVENDER. MARSH ROSEMARY (*Statice Caroliniana*). Leadwort family.

Av. ht. abt. $1\frac{1}{2}$ ft.; flowerless stem branching; flowers lavender, small, paniced or scattered; petals 5; leaves thick, with stalks, oblong. Salt marshes. Summer and fall.

18. Leaves not opposite, upright plant, leaves (not from root only) divided or deeply cut, 5 petals.

PURPLE AVENS (*Geum rivale*). Rose family.

Av. ht. 2 ft.; flowers few, large, terminal, purple; petals 5, inversely egg-shaped, notched; stamens many; root-leaves lyrate and pinnate, those of stem few, 3-lobed. Wet places. Early summer.

HIGH MALLOW (*Malva sylvestris*). Mallow family.

Max. ht. 3 ft.; stem hairy, branching; calyx apparently double, outer part with 3 sepals; petals 5, pinkish, inversely heart-shaped; flowers (1 in.) in close axillary clusters; leaves generally 5-lobed. Roadsides. Summer.

19. Same as 18, but flowers not with 5 petals.

GOAT'S RUE (*Tephrosia Virginiana*). Pulse family.

Max. ht. 2 ft.; upright, leafy stem; flowers papilionaceous, large, in terminal clusters (or racemes); "greenish, cream-yellow standard, purplish-rose wings, and curved keel of greenish-yellow tinged with rose" (Blanchan); leaves from 17-29 linear-oblong leaflets (Gray). Sandy ground. Early summer. Southern New England, West and South.

JACOB'S LADDER (*Polemonium coeruleum*). Polemonium family.

Max. ht. 3 ft.; flowers clustered, terminal; corolla (blue-purple) bell-shaped, 5-lobed; leaves pinnately compound; leaflets without stalks, 9-21. Swampy ground. Spring, summer. New York and South.

MONK'S HOOD (*Aconitum uncinatum*). Crowfoot family. Upright, but with *delicate stems*; flowers (purple-blue) in paniced clusters; sepals (5) irregular, one hooded; corolla of two insignificant petals; *leaves of 3-5 lobes*, notched at end. Rich ground. Early summer. N. J. and South.

SWAMP THISTLE (*Cnicus muticus*). Composite family. Max. ht. 8 ft.; flower a large, purple *thistle head*; lobes of leaf *bearing prickles*. Wet ground. Summer, autumn.

20. **Leaves not opposite, upright plant, leaves (not from root only) simple, flowers of Composite family, yellow centres.**

PURPLE ASTERS. Composite family. Flower-heads mostly paniced or corymbed; ray-flowers purple, disk-flowers yellow; leaves various in different species. Autumn.

21. **Same as 20, but without yellow centres.**

IRON-WEED (*Vernonia noveboracensis*). Composite family. Tall plant; flower-heads large in open cluster at top of stem (purple); flowers all tubular; leaves lance-shaped, short-stalked. Low ground, near coast. Late summer.

BLAZING STAR (*Liatris scariosa*). Composite family. Ht. several ft.; flower-heads large, scattered along stem, with stalks, very conspicuous, pink-purple; leaves narrow, long-pointed, tapering to leaf-stalk. Dry ground. Late summer or autumn.

22. **Leaves not opposite, upright plant, leaves (not from root only) simple, flowers not of Composite family, in cluster, 5 petals.**

LIVE-FOREVER (*Sedum Telephium*). Orpine family. Ht. 1 ft.; flowers (rare) in terminal clusters; sepals 5; petals 5, purple; stamens 10; leaves fleshy, cool and clammy, grayish-green, oval, round-pointed, regularly toothed. Roadsides, especially in damp places. Early summer, autumn.

23. Same as 22, but not 5 petals.

CONRAD'S BROOM. CROWBERRY (*Corema Conradii*).
Crowberry family.

Max. ht. 2 ft.; branching shrub; flowers small, purple, terminal; corolla none; stamens prominent; leaves linear. Rocks and sand. Early spring.

24. Leaves not opposite, upright plant, leaves (not from root only) simple, flowers in spike.

PURPLE FRINGED ORCHIS (*Habenaria fimbriata*). Orchis family.

Max. ht. 3 ft.; spike loosely flowered; flowers large, light-purple, *with long spurs, lip fringed*; lower leaves oval to lance-shaped, upper much smaller. Wet meadows. Summer.

25. Same as 24, but flowers in raceme.

SEA ROCKET (*Cakile Americana*). Mustard family.

Low plant; flowers small, purplish; *petals 4*; leaves inversely lance-shaped, *thick, toothed*. Seaside. Summer.

26. Same as 24, but flowers not in cluster, spike, or raceme.

DOG VIOLET (*Viola canina*). Violet family.

Ht. several in.; *flower of the violet*; leaves heart-shaped, or lowest kidney-formed, with wavy edges, upper somewhat pointed. Sandy places. Spring, summer.

BLACK CROWBERRY (*Empetrum nigrum*). Crowberry family.

Low, spreading shrub with slender stems; flowers small, axillary, solitary, "purplish" (Britton & Brown); *3 sepals like petals*; *leaves linear*, closely set. Rocky ground. Summer. (See illustration, Black Fruit 6.)

BURDOCK (*Arctium Lappa*). Composite family.

Ht. 1-3 ft.; *spherical flower-heads*, consisting of green bristles but with tubular light-purple florets; leaves egg-heart-shaped. Waste ground. Summer, autumn.

PLATE II



1. Fern (*Pteris aquilina*). 2. *Iris Germanica*. 3. Southern blue flag (*Iris versicolor*).
 4. *W. ...*. 5. *Iris ...*. 6. *Iris ...*. 7. *Iris ...*. 8. 9. Podian cactus or root (*Mimosa Virgiana*).
 10. *Yucca ...*. 11. *Sisyrinchium ...*

PLATE II

23. Same as 22, but not 5 petals

CONRADIA (CROWBERRY) (*Conradia Conradii*)

Max. ht. 2 ft. Leaves narrow, flowers small, single, terminal, corolla 5 petals prominent; roots in air. Rocks and soil. Dry spring.

24. Leaves not opposite, upright, flat, leaves not from root only; simple, lower in pair.

PURPLE PRINCE (CENS) (*Prinsepia sinensis*) (Orchid family)

Max. ht. 3 ft. Leaves loosely covering ground, flowers large, light-purple, long-tubed, 2-lipped, lower leaves oval to lance-shaped, upper much smaller. Wet meadows. Summer.

25. Same as 24, but flowers in raceme.

SEA ROCK (Calyculid) (*Calyculid*) Mustard family

Low plant; flowers small, purplish; petals 4, leaves inversely lance-shaped, thick, leathery. Seaside. Summer.

26. Same as 24, but flowers in large cluster, suber or rare.

DOG VIOLET (*Viola canina*) (Violaceae family)

Ht. several inches. Leaves heart-shaped, or lowest kidney-shaped, waved edges, upper somewhat pointed, lower rounded. Sandy places. Spring, summer.

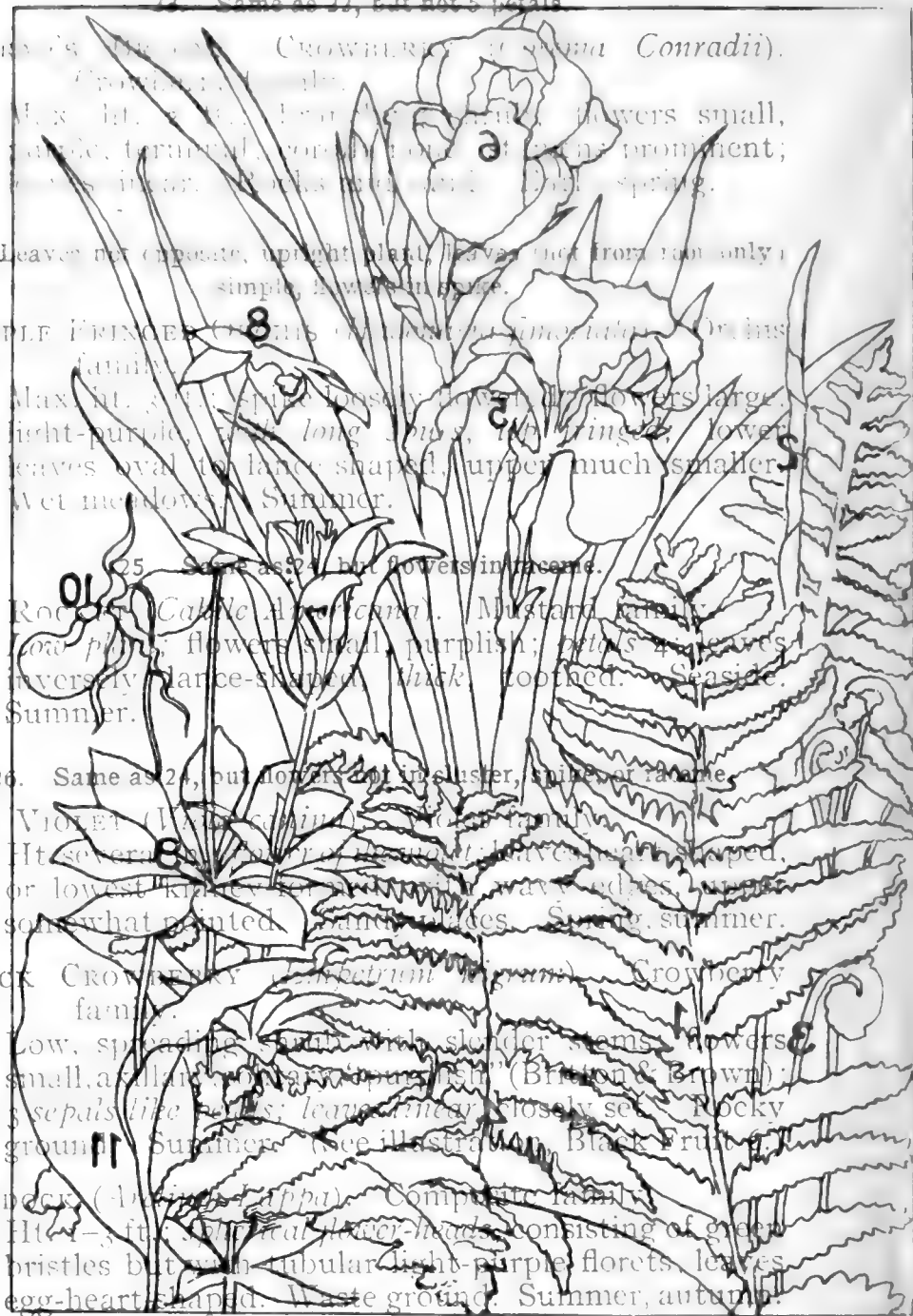
BLACK CROWBERRY (*Chamaenerion*) (Crowsfoot family)

Low, spreading plant with slender stems. Flowers small, as white as yellowish (Briston & Brown); sepals like petals; leaves finely closely set. Rocky ground. Summer (see illustration). Black Fruit.

BURDECK (*Boerhaavia*) (Compositae family)

Ht. 1-3 ft. Small flower-heads consisting of green bristles but with tubular light-purple florets. Leaves egg-heart-shaped. Waste ground. Summer, autumn.

1. 4. Ferns; 2. Flower-de-lis (Liris Germanica); 3. Flower-de-lis (Liris Germanica); 4. Southern blue flag (Liris hexagona); 5. Wood lily (Lilium Philadelphicum); 6. Indian cucumber-root (Medsola Virginia); 7. Yellow lady's slipper (Cypripedium pubescens); 8. 9. Yellow lady's slipper (Cypripedium pubescens); 10. 11. Yellow lady's slipper (Cypripedium pubescens).





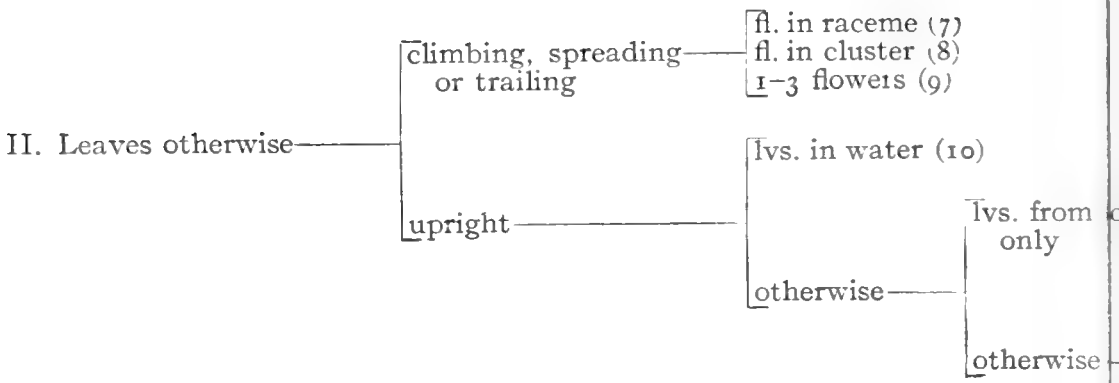
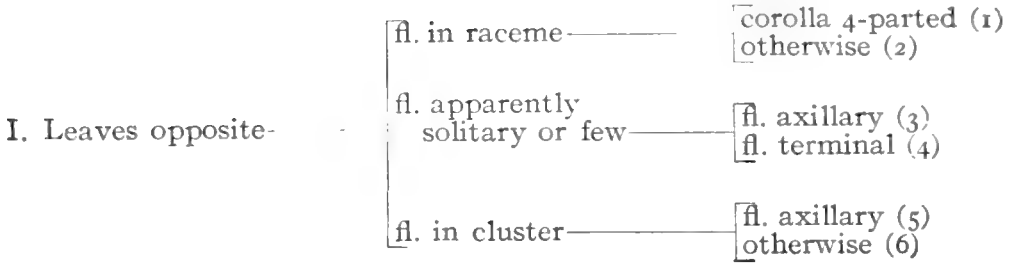


BLUE FLOWERS



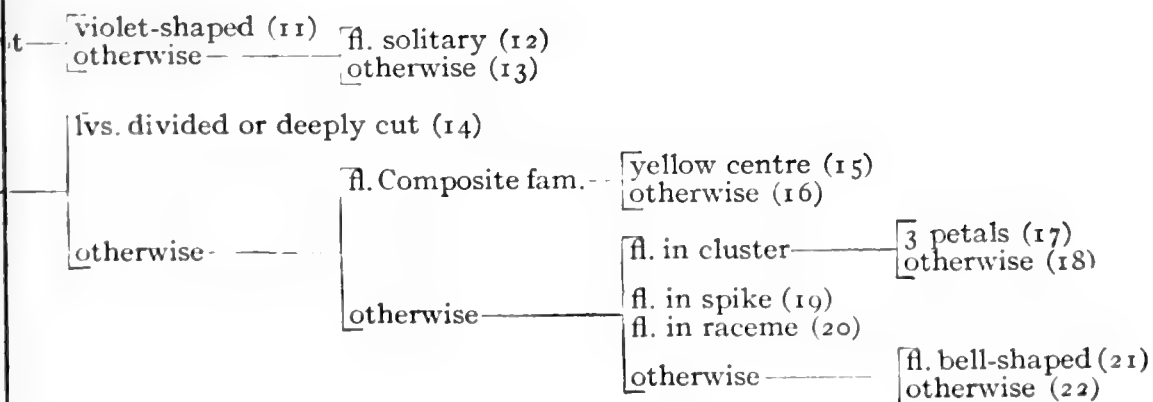


(First, see whether plant falls in Class I or II; the number reached, this number



LOWERS

follow out to right. When a number in parentheses indicates the group desired)





BLUE FLOWERS

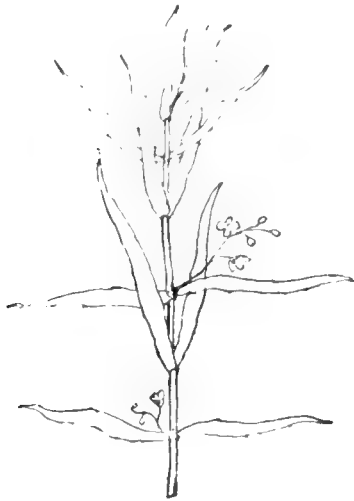
I. LEAVES MOSTLY OPPOSITE.

1. Leaves mostly opposite, flowers in raceme, corolla 4-parted.

WATER SPEEDWELL (*Veronica Anagallis-aquatica*). Figwort family.

Max. ht. 3 ft.; flowers small, light blue; leaves (of the flowering stems) *without stalks*, egg-shaped-lance-shaped. Wet places. All summer. Spring to autumn.

Fig. 72.



Marsh speedwell (*Veronica scutellata*).

MARSH SPEEDWELL (*Veronica scutellata*). Figwort family.

Ht. $\frac{1}{2}$ -2 ft.; sometimes reclining; flowers small, light blue, few in raceme, on very slender stalks; leaves *long and linear*, very sparingly toothed, clasping. Wet places. Spring to autumn.

BROOKLIME (*Veronica Americana*). Figwort family.
Length several in. to 3 ft.; flowers blue; calyx and corolla generally 4-parted; leaves *mostly with stalks*, oblong to egg-shaped, generally toothed, somewhat heart-shaped at base. Ditches. Common. Early summer.

SPEEDWELL (*Veronica officinalis*). Figwort family.
Ht. under 1 ft.; *hairy*; stem lying on ground; flowers light blue, small, in long racemes; calyx and corolla generally 4-parted; leaves *short* stalked, oblong to inversely egg-shaped, obtuse, toothed. Hills and woods. Summer.

THYME-LEAVED SPEEDWELL (*Veronica serpyllifolia*).
Figwort family.
Ht. few in.; branching at base; flowers light blue, small, in terminal racemes; corolla generally 4-parted; leaves oblong to egg-shaped, *wavy toothed*, lowest with stalks and rounded. Roadsides and fields. Common. Spring, summer.

2. **Leaves mostly opposite, flowers in raceme, corolla not 4-parted.**

MAD-DOG SKULL-CAP (*Scutellaria lateriflora*). Mint family.
Max. ht. 2 ft.; stem square, smooth, much branched; racemes generally axillary; calyx 2-lipped; corolla 2-lipped, blue, pointed; leaves *coarsely toothed*, base rounded, with *long* stalks. Wet places. Common. Summer, autumn.

SKULL-CAP (*Scutellaria integrifolia*). Mint family.
Max. ht. 2 ft.; minutely hairy; stem square; *racemes terminal*, flowers (blue) 1 in. long; calyx 2-lipped, upper lip with cap; corolla 2-lipped; leaves lance-shaped to linear, *mostly without teeth*, short stalked. Dry ground. Summer. R. I., West and South.

3. Leaves mostly opposite, flowers solitary or few, axillary.

SMOOTH RUELLIA (*Ruellia strepens*). Acanthus family. Max. ht. 4 ft.; flowers almost without stalks, 1 or few, large; corolla (blue) tubular, with 5 spreading lobes at end; leaves long and pointed, stout stalked. Rich ground. Spring, summer. Penn., South and West.

SKULL-CAP (*Scutellaria galericulata*). Mint family. Ht. 1-3 ft.; stem square, slightly downy; calyx and (blue) corolla 2-lipped; flowers solitary in axils of upper leaves; leaves broadly lance-shaped, almost heart-shaped at base, toothed. Wet ground. Early summer-autumn.

4. Leaves mostly opposite, flowers solitary or few, terminal.

BLUETS. INNOCENCE (*Houstonia coerulea*). Madder family. Ht. few inches; stems slender; flowers small, light blue with yellow centre, generally terminal, solitary; corolla with tube ending in 4 petal-like divisions; leaves small, pointed. Grassy places. Early spring to midsummer.

FRINGED GENTIAN (*Gentiana crinita*). Gentian family. Max. ht. 2 ft.; flowers large, dark blue, solitary, terminal; calyx 4-pointed; corolla (2 in. long) with fringe; leaves lance-shaped, from rounded base, without stalks. Low grounds. Late summer and autumn.

GENTIANA ANGUSTIFOLIA. Gentian family. Ht. $\frac{1}{2}$ -1 ft. or over; flower large, solitary, terminal; corolla of 5 pointed lobes, light blue; leaves linear. Pine barrens. Late summer, autumn. New Jersey and South.

5. Leaves mostly opposite, flowers in cluster, axillary.

GILL-OVER-THE-GROUND (*Nepeta Glechoma*). Mint family. Running on ground, about 1 ft. long; stem square, odorous; clusters loosely flowered, flowers pale blue; corolla 2-lipped; leaves with stalks, round-kidney-shaped, wavy toothed. Damp places and in shade. Spring.

6. Leaves mostly opposite, flowers in cluster, not axillary.

FIVE-FLOWERED GENTIAN (*Gentiana quinqueflora*). Gentian family.

Av. ht. $1\frac{1}{2}$ ft.; about 5 flowers at top of stem; flowers large, light blue; corolla with pointed lobes; leaves egg-shaped, pointed, clasping, without teeth and without stalks. Hills. Late summer and autumn.

CLOSED GENTIAN (*Gentiana Andrewsii*). Gentian family. Ht. abt. $1\frac{1}{2}$ ft.; flowers large, dark blue, in clusters at top; corolla closed; leaves lance-shaped, pointed, without stalks. Moist ground. Late summer and autumn.

II. LEAVES NOT OPPOSITE.

7. Leaves not opposite. Plant climbing, spreading or trailing, flowers in raceme.

BLUE VETCH (*Vicia Cracca*). Pulse family.

Length 2-4 ft.; stem slender, climbing by tendrils, flowers (blue) papilionaceous, in many-flowered spike-like raceme; leaflets 18-24, narrowly oblong. Border of thickets. Mid-summer.

FORGET-ME-NOT (*Myosotis laxa*). Borage family.

Low plant; stems slender, reclining; small (blue) flowers in racemes; corolla salver-form, 5-lobed; leaves lance-shaped-oblong or somewhat spoon-shaped. Wet ground. Summer.

8. Same as 7, but flowers in cluster.

SEA-LUNGWORT (*Mertensia maritima*). Borage family. Spreading; flowers, blue, in terminal raceme-like clusters; corolla somewhat *trumpet-shaped*; leaves with very short stalks, not toothed. Beaches. Spring–autumn.

Fig. 73.

Blue vetch (*Vicia Cracca*).

9. Same as 7, but flowers 1–3.

BUTTERFLY-PEA (*Clitoria Maritima*). Pulse family. Twining plant; flowers large, conspicuous, papilionaceous, light-blue, 1–3 on stalk; *leaflets* 3, lance-shaped. Dry ground. New York, West and South.

10. Leaves not opposite, upright plant, leaves in water.

WATER LOBELIA (*Lobelia Dortmanna*). Lobelia family. Av. ht. 1 ft.; leaves in water, *linear*; leafless stem hollow, bearing an open raceme of light blue flowers; calyx 5-pointed; corolla with straight tube, 2-lipped with lips 2-lobed and 3-lobed. Borders of ponds. Summer and early autumn.

11. Leaves not opposite, upright plant, leaves not in water, from root only, flowers violet-shaped.

BIRD-FOOT VIOLET (*Viola pedata*). Violet family.

Ht. under 1 ft.; leaves 3- to 5-divided or parted, all divisions linear or nearly so, sometimes notched at apex; flowers single, large (1 in. broad). Early spring.

Fig. 74.



Blue-eyed grass (*Sisyrinchium angustifolium*).

12. Same as 11, but flower not violet-shaped, solitary.

BLUE-EYED GRASS (*Sisyrinchium angustifolium*). Iris family.

Ht. under 1 ft.; flowers 2-4, small, blue with yellow centre, on delicate stem, 6 apparent petals, leaves like grass. Moist places in grass. Summer.

13. Same as 11, but flower not violet-shaped, not solitary.

PICKEREL-WEED (*Pontederia cordata*). Pickerel-weed family.

Av. ht. $2\frac{1}{2}$ ft.; stout, growing in water; flowers dark blue, in thick spike, perianth funnel-formed, 2-lipped,

each lip 3-lobed, 3 lower lobes separating, upper lobe with 2 yellow spots; leaves (1 with long sheath about flowering stem) arrow-shaped, generally blunt. Summer.

14. Plant upright, leaves (other than opposite, in water, or from root only) divided or deeply cut.

DWARF LARKSPUR (*Delphinium tricorne*). Crowfoot family.

Max. ht. 1½ ft.; flowers with spur; sepals (5) petal-like; *petals* 4; raceme with few flowers; *leaves* 5-divided with pointed lobes at end. West of Penn. to Minn. and southward. Early spring.

WILD LUPINE (*Lupinus perennis*). Pulse family.

Max. ht. 2 ft.; flowers (blue) in long raceme at end; flowers *papilionaceous*, ½ in. or more long; leaves palmately compound, *leaflets* 7-11, inversely lance-shaped. Sandy ground. Early summer.

TALL LARKSPUR (*Delphinium exaltatum*). Crowfoot family.

Ht. several ft.; racemes long and slender, many flowered; flowers with spur; sepals 5, like petals; *petals* 4; leaves 3- to 5-divided with pointed lobes at end. Rich soil. Summer. Penn. to Minn. and southward.

15. Plant upright, leaves (not opposite) simple, flower composite, with yellow centre.

ROBIN'S PLANTAIN (*Erigeron bellidifolius*). Composite family.

Max. ht. 2 ft.; hairy; flower-heads like large asters with long blue ray-flowers and yellow disks; *root-leaves* inversely egg-shaped and spoon-shaped, somewhat toothed, *stem-leaves* partly clasping. Thickets and banks. Spring.

BLUE ASTERS. Composite family.

Flower-heads mostly paniced or corymbed; ray-flowers blue, disk-flowers yellow. Leaves various in different species. Autumn.

ASTER PATENS. Composite family.

Max. ht. 3 ft.; solitary flower-heads ($\frac{1}{2}$ in.) at end of branches; ray-flowers dark blue; disk-flowers yellow; leaves clasping. Dry ground. Autumn. Common.

16. Same as 15, but flowers not with yellow centre.

CHICORY. SUCCORY (*Cichorium Intybus*). Composite family.

Av. ht. abt. 2 ft.; flower-heads large, showy, light blue, directly upon the stem, 2 or 3 together, axillary and terminal; rays toothed at end; stem-leaves partly clasping. Roadsides. Summer, autumn.

Fig. 75.



Chicory (*Cichorium Intybus*).

17. Plant upright, leaves (not opposite) simple, flowers not composite, flowers in cluster, 3 petals.

SPIDERWORT (*Tradescantia Virginiana*). Spiderwort family.

Max. ht. 3 ft.; somewhat hairy; leaves narrow and long; blue flowers (1-2 in.) in umbellate clusters in axils and at end of stem, with stalks. Rich ground. Spring, summer. New York.

18. Same as 17, but not with 3 petals.

BLUE BELLS (*Mertensia Virginica*). Borage family.

Max. ht. 2 ft.; flowers, blue, in loose clusters at end of stem; calyx 5-parted; corolla (1 in.) narrowly bell-shaped; leaves obtusely pointed, those at root with stalks. Banks. Spring.

19. Plant upright, leaves alternate, flowers not composite, flowers in spike.

VIPER'S BUGLOSS. BLUEWEED (*Echium vulgare*). Borage family.

Max. ht. 2 ft.; stem stiffly hairy; flowers showy ($\frac{3}{4}$ in.); corolla with funnel-formed tube, and unequal 5-lobed border; *stamens* (5) red, *protruding*; stem-leaves pointed, without teeth, lance-shaped, without stalks. Roadsides and waste places. Early summer.

20. Same as 19, but flowers in raceme.

GREAT LOBELIA (*Lobelia siphilitica*). Lobelia family.

Max. ht. 3 ft.; somewhat *hairy*; flowers blue, nearly 1 in. long, with stalks; calyx 5-pointed; corolla ($\frac{1}{2}$ in.) 2-lipped, lips 2-cleft and 3-cleft; leaves often pointed at both ends, irregularly toothed. Low grounds. Summer.

INDIAN TOBACCO (*Lobelia inflata*). Lobelia family.

Max. ht. 2 ft.; flowers similar to above but much smaller; leaves egg-shaped to oblong, sparingly toothed; *pod inflated*.

PALE SPIKED LOBELIA (*Lobelia spicata*). Lobelia family.

Max. ht. 4 ft.; stem slender, leafy; flowers similar to above, *pod not inflated*.

BLUE LINARIA. BLUE TOADFLAX (*Linaria Canadensis*).

Figwort family.

Ht. several in. to 2 ft.; slender; flowers very small, racemed on stem, light blue; calyx 5-pointed; *corolla 2-lipped with spur*; *leaves linear. in tufts along stem*, not toothed. Sandy soil. Common. Summer.

EUROPEAN BELL-FLOWER (*Campanula rapunculoides*).
Campanula family.

Av. ht. abt. 2 ft.; flower *bell-shaped*, pendulous;
corolla 1 in. long; upper leaves narrow, lower long-
stalked, *heart-shaped*. Open places. Summer.

21. Plant upright, leaves alternate, flowers not composite, and not
in cluster, spike or raceme, flower bell-shaped.

HAREBELL (*Campanula rotundifolia*). Campanula family.
Ht. gen. under 1 ft.; stem slender; flowers blue,
generally few, pendulous, on very delicate stalks;
calyx and corolla 5-pointed; lower leaves rounded,
toothed, long-stalked; stem-leaves linear, without
teeth. Shady banks. Summer.

Fig. 76.



Harebell (*Campanula rotundifolia*).

22. Same as 21, but flowers not bell-shaped.

VENUS' LOOKING-GLASS (*Specularia perfoliata*). Cam-
panula family.

Max. ht. 2 ft.; hairy; flowers (blue) without stalks,
solitary, or 2-3 in axils; calyx and corolla 5-pointed;
leaves rounded, clasping. Woods. Spring-autumn.

DAY-FLOWER (*Commelina Virginica*). Spiderwort family.
Max. ht. 3 ft.; slender; flowers blue, in *umbellate*
clusters in axils and at end; *petals unequal*; leaves
lance-shaped, some clasping. Damp woods. Sum-
mer. New York, West and South.

BROWNISH AND VARIEGATED
FLOWERS

BROWNISH AND VARIEGATED FLOWERS

(See if plant falls in Group 1, 2, or 3)

1. Climbing plant.
2. Upright plants with leaves from base only.
3. Other upright plants.

BROWNISH AND VARIEGATED FLOWERS

1. Climbing plant.

GROUND-NUT. WILD BEAN (*Apios tuberosa*). Pulse family.

A vine, several ft. high; flowers in a close cluster on long stalk, "maroon and pale lilac-brown" (Matthews), odorous; leaves of 5-7 pointed leaflets, without teeth. Wet places. Late summer, autumn.

2. Upright plants with leaves from base only.

SKUNK CABBAGE (*Symplocarpus foetidus*). Arum family.

Low plant with large leaves, sometimes 3 ft. by 1 ft.; flowers small, packed on spadix with hood (spathe) variously colored (green-purple-yellow-brown) and mottled. Wet ground. Very early spring.

WILD GINGER (*Asarum Canadense*). Birthwort family.

A low plant with several large angularly heart-shaped leaves on long hairy stalks; single inconspicuous bell-shaped flower "dull purplish-brown" (Dana) with 3-pointed rim, near the ground. Woods. Spring.

3. Other upright plants.

JACK-IN-THE-PULPIT. INDIAN TURNIP (*Arisaema triphyllum*). Arum family.

Ht. 1-3 ft.; flowers small, packed on the spadix and surmounted by a hood (spathe) variously colored (green-purple-white); leaves usually with 3 pointed leaflets. Spring.

FEVERWORT. HORSE GENTIAN (*Triosteum perfoliatum*).
Honeysuckle family.

Ht. few ft.; perennial herb with rather stout stem; flowers axillary; corolla "purplish-brown" (Britton and Brown), tubular, with edge 5-lobed; calyx with very long pointed lobes, persisting in the fruit (a large orange berry); leaves opposite, oval or egg-shaped, not toothed, wavy, somewhat clasping. Rich ground. Spring, summer.

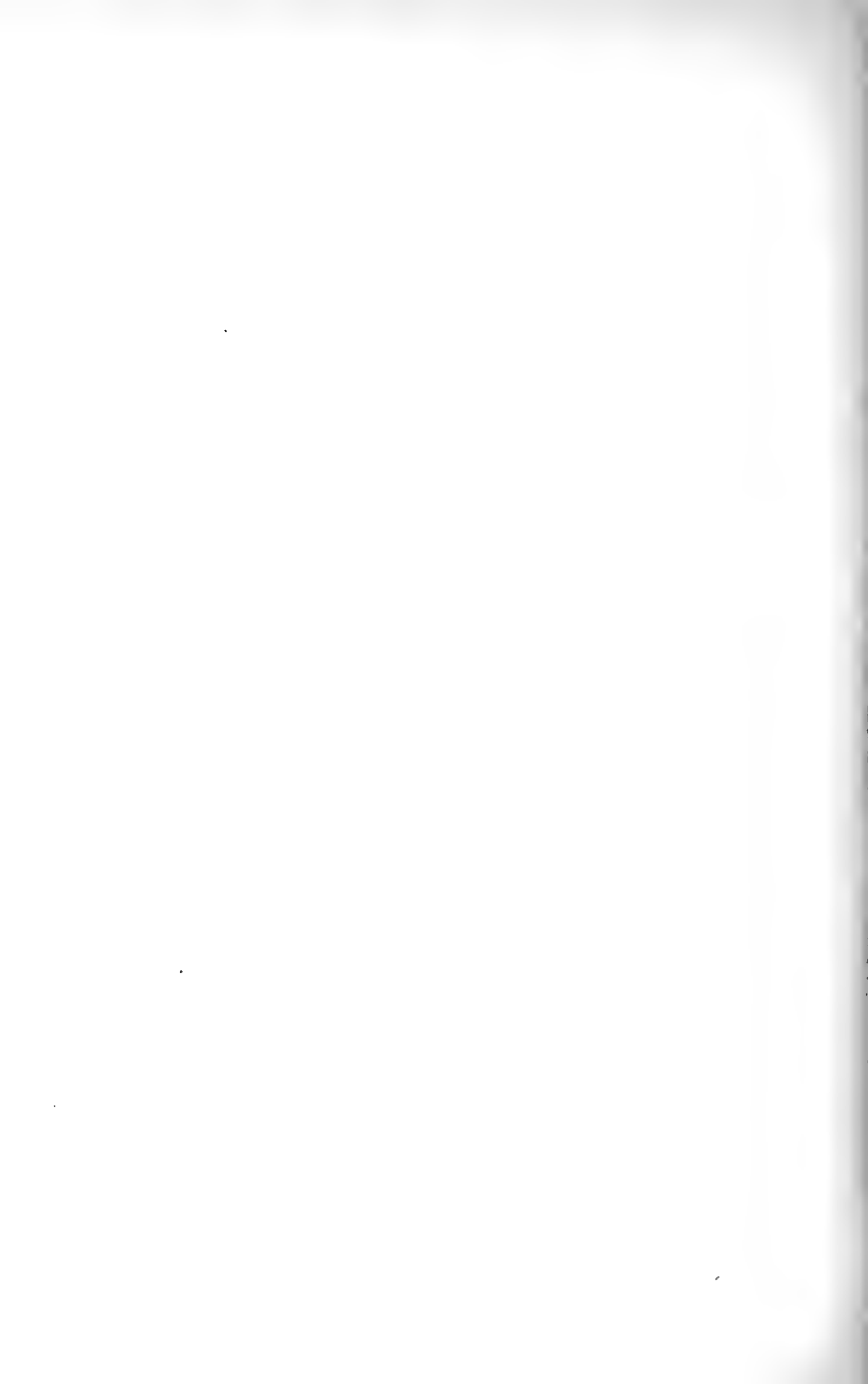
BRANCHING BUR-REED (*Sparganium androcladum*). Cat-tail family.

Max. ht. 3 ft.; flowers minute, brownish, in round heads arranged along the slender and branching stem; leaves long and narrow. Wet ground. Summer.

BEECHDROPS (*Epiphegus Virginiana*). Broomrape family.

Low plant; branching fleshy stem with scales but no leaves; flowers small, tubular, in spike or raceme, brown-purple-yellow. Under beech trees. Late summer, autumn.

PART II.
GUIDE TO THE FRUITS
-
RED FRUIT





RED FRUIT

1. Fruit, solitary or few, terminal.

CLOUD-BERRY (*Rubus chamaemorus*). Rose family.
Ht. under 1 ft.; 2-3 leaved; leaves somewhat heart-shaped, lobed and with teeth. Fruit solitary, terminal, consisting of a few grains (drupes), edible. Swamps.

WAKE-ROBIN (*Trillium erectum*). Lily family.
Ht. abt. 1 ft.; leaves (3) whorled, almost without stalks. Fruit a large, egg-shaped, 6-angled berry. Woods. Late summer.

2. Fruit, solitary or few, not terminal, plant creeping.

CRANBERRY (*Vaccinium macrocarpon*). Heath family.
Stem long and slender; leaves oval, blunt. Fruit a large sour berry. Bogs. Autumn.

PARTRIDGE-BERRY (*Mitchella repens*). Madder family.
Running; leaves with stalks, egg-shaped, pointed, shining, evergreen. Fruit berries growing in pairs.

SMALL CRANBERRY (*Vaccinium Oxycoccus*). Heath family.
Creeping plant with delicate stems; leaves small, evergreen, thick, egg-shaped. Fruit a red berry.

3. Fruit, solitary or few, not terminal, plant upright.

WINTERGREEN (*Gaultheria procumbens*). Heath family.
Ht. few inches; leaves evergreen, oval, obscurely toothed. Fruit pendent, axillary, on short stalks, globular, 5-celled, each cell containing many seeds.

TWISTED-STALK (*Streptopus roseus*). Lily family.

Ht. abt. $1\frac{1}{2}$ ft.; stem stout, branches with short hairs: leaves egg-shaped, pointing, clasping. Fruit red, an oblong berry, solitary or in pairs, pendant from axils on delicate, bent, stalks. Late summer.

WINTERBERRY. BLACK ALDER (*Ilex verticillata*). Holly family.

Tall shrub; leaves oval or inversely egg-shaped, pointed, toothed. Fruit coral red berry with black spot (stigma) at top, solitary or few (or clustered) in axils, on very short stalks; nutlets 4-6. Early autumn.

Fig. 77.



Winterberry (*Ilex verticillata*).

Fig. 78.



Feverwort (*Triosteum perfoliatum*).

FLY HONEYSUCKLE (*Lonicera ciliata*). Honeysuckle fam.

Shrub, av. ht. 3 ft.; leaves rather sharply pointed, egg-shaped, toothed, opposite. Fruit ovoid berries growing in pairs on the end of stalks from axils. Early summer.

FEVERWORT. HORSE GENTIAN (*Triosteum perfoliatum*).
Honeysuckle family.

Perennial herb few ft. high, stout stem, leaves opposite, somewhat clasping. Fruit large orange berry in axil of leaf, long calyx-lobes persisting; nutlets 3. Early autumn.

4. Fruit in raceme.

SHAD-BUSH (*Amelanchier Canadensis*). Rose family.
Tall shrub; leaves egg-shaped to oblong, usually somewhat heart-shaped at base, pointed, sharply toothed. Fruit (pome) berry-like, round, red, sweet and edible. Low ground. Early summer.

RED BANE-BERRY (*Actaea rubra*). Crowfoot family.
Ht. abt. 2 ft.; leaves of many leaflets; leaflets pointed, cut and toothed. Berries small, numerous, in a terminal raceme at the end of a long stalk. Midsummer.

WILD LILY-OF-THE-VALLEY (*Maianthemum Canadense*).
 Lily family.
Ht. few in.; leaves 2 or 3, long, pointed, heart-shaped at base, without stalks or with very short ones. Fruit finally a red berry (at first only speckled with red) in terminal raceme. (See illustration under White Flowers 45).

CHOKER CHERRY (*Prunus Virginiana*). Rose family.
Tall shrub; leaves egg-shaped to oblong, obtusely pointed, with fine teeth. Fruit round, dark red, in pendent racemes. Midsummer.

5. Fruit in spike.

JACK-IN-THE-PULPIT. INDIAN TURNIP (*Arisaema tri-phyllum*). Arum family.
Ht. 1-3 ft.; leaves usually with 3 pointed leaflets. Fruit bright red berries, close together upon the spadix.

6. Fruit clustered, plant trailing, climbing.

NIGHTSHADE (*Solanum Dulcamara*). Nightshade family.
Leaves alternate, heart-shaped, or with ears at base. Fruit oval berries in pendent clusters. Midsummer.
 BEARBERRY (*Arctostaphylos Uva-ursi*). Heath family.
Leaves evergreen, thick, broadening at end, with short stalks. Fruit red, berry-like, in clusters.

BITTER-SWEET (*Celastrus scandens*). Staff-tree family.
Twining shrub; leaves egg-shaped-oblong, with teeth. Fruit rounded, berry-like, *curling back finally in 3 divisions* when ripe so as to show the red covering of the seeds. Early autumn.

TRUMPET HONEYSUCKLE (*Lonicera sempervirens*).
Honeysuckle family.
Climbing; leaves oblong, lower with stalks, upper pairs confluent. Fruit red berries at end of stems. Late summer and autumn.

Fig. 79.

Jack-in-the-pulpit (*Arisaema triphyllum*).

7. Fruit clustered, upright herbs.

BUNCHBERRY (*Cornus Canadensis*). Dogwood family.
Ht. *several in.*; leaves 4-6 in whorl, egg-shaped or oval, pointed. Fruit (drupe) bright-red, berry-like, clustered at top of stem. Late summer.

SPIKENARD (*Aralia racemosa*). Ginseng family.
Ht. several ft.; *leaflets heart-shaped*, with double teeth. Fruit red (or dark purple or black), berry-like, small, many in a long cluster. Early autumn.

FALSE SOLOMON'S SEAL (*Smilacina racemosa*). Lily family.
Av. ht. 2 ft.; leaves long, pointed, with parallel veins. Fruit a round berry finally dull-red (earlier white, with red speckles); fruit in a terminal cluster (compound raceme). Early autumn.

8. Fruit clustered, upright shrubs, with thorns.

HAWTHORN (*Crataegus coccinea*). Rose family.

Shrub or small tree; thorns stout, leaves thick and shiny, inversely egg-shaped or lance-shaped. Fruit, axillary, red, in clusters. Late summer.

Fig. 80.



False Solomon's seal (*Smilacina racemosa*).

COCKSPUR THORN (*Crataegus Crus-galli*). Rose family.

Shrub or small tree; thorns slender; leaves thick and shiny, inversely egg-shaped or lance-shaped. Fruit globular, red, in clusters on short side branches. Late summer or autumn.

WILD ROSE. SWEETBRIER (*Rosa rubiginosa*). Rose family.

Shrub, max. ht. 6 ft.; leaves *compound* with rounded, *doubly toothed* leaflets. Fruit oval, resembling large berry ($\frac{1}{2}$ – $\frac{3}{4}$ in. or larger) sometimes called "hips."

DOG ROSE (*Rosa canina*). Rose family.

Similar but leaflets single toothed, and fruit not over $\frac{3}{4}$ in. long.

9. Fruit clustered, upright shrubs, without thorns, leaves opposite.

RED-BERRIED ELDER (*Sambucus racemosa*). Honeysuckle family.

Av. ht. 6-8 ft.; leaflets 5-11, toothed, oblong. Fruit (drupe) bright-red, berry-like, in pyramidal terminal cluster. Early summer.

HOBBLE-BUSH (*Viburnum lantanoides*). Honeysuckle family.

Rather tall shrub; leaves broadly egg-shaped, pointed, finely and sharply toothed. Fruit coral-red, berry-like, in flat terminal clusters.

MAPLE-LEAVED VIBURNUM. DOCKMACKIE (*Viburnum acerifolium*). Honeysuckle family.

Ht. several ft., straggly growth; leaves of 3 lobes, lobes pointed, irregularly toothed. Fruit (drupe) berry-like, crimson (turning purple) in flat terminal clusters.

INDIAN CURRANT (*Symphoricarpos vulgaris*). Honeysuckle family.

Shrub, max. ht. 5 ft.; leaves oval, not toothed, blunt-pointed, short-stalked. Fruit a small, ovoid berry, growing in short clusters, practically without stalks, in the axils of the leaves, remaining through the winter; 2 bony nutlets. New Jersey, West and South.

FLOWERING DOGWOOD (*Cornus florida*). Dogwood family.

Shrub or small tree; leaves broadly oval, pointed, stalked. Fruit oval, closely clustered at end of long stalk. Early autumn.

10. Fruit in clusters, upright shrubs, without thorns, leaves alternate, fruit axillary.

MOUNTAIN HOLLY (*Nemopanthes fascicularis*). Holly family.

Shrub, av. ht. 7 ft.; leaves oblong, without teeth or single toothed. Fruit (drupe) coral-red, berry-like, clustered in axils (or solitary), on long slender stalks. Early autumn.

WINTERBERRY (*Ilex verticillata*). Holly family.

Tall shrub; leaves oval or inversely egg-shaped, pointed, toothed. Fruit coral-red berry with black spot (stigma) at top, solitary or few (or clustered) in axils, on *very short* stalks; nutlets 4-6. Early autumn.

CHOKEBERRY (*Pyrus arbutifolia*). Rose family.

Ht. 1 ft. or over; leaves oblong or inversely lance-shaped, mostly pointed. Fruit (pome) berry-like, pear-shaped or round, dark red or blackish.

11. Fruit in clusters, upright shrubs, without thorns, leaves alternate, fruit not axillary.

STAGHORN SUMAC (*Rhus typhina*). Cashew family.

Tall shrub or small tree; leaves compound, leaflets 11-31, lance-shaped, pointed, toothed. Fruit crimson, small, globular, hairy, in upright pyramid, closely clustered at top. Late summer.

PURPLE-FLOWERING RASPBERRY (*Rubus odoratus*). Rose family.

Max. ht. 5 ft.; leaves broad with 3-5 lobes, toothed, middle lobe long. Fruit resembling common raspberry.

Fig. 81.



Purple-flowering raspberry (*Rubus odoratus*).

SPICE-BUSH (*Lindera Benzoin*). Laurel family.

Tall shrub; leaves oblong-inversely-egg-shaped. Fruit (drupe) red, shining, berry-like, pear-shaped, in clusters along the branches, on short stalks. Early autumn.

WHITE OR WHITISH FRUIT



WHITE OR WHITISH FRUIT

Trailing, climbing (1).

Upright herbs (2).

Upright shrubs (3).

1. Trailing, climbing.

CREeping SNOWBERRY (*Chiogenes serpyllifolia*). Heath family.

Trailing; leaves small, rounded, evergreen, on short stalks. Fruit a white berry, solitary in axils. Late summer.

POISON IVY (*Rhus Toxicodendron*). Cashew family.

Climbing or erect; *leaflets* 3, rhombic to egg-shaped, mostly pointed, unequally notched, wavy or cut. Fruit small, globular, berry-like, dun-colored, clustered in axils. Early autumn.

2. Upright herbs.

WHITE BANEbERRY (*Actaea alba*). Crowfoot family.

Ht. abt. 2 ft.; leaves of many leaflets; leaflets pointed, cut and toothed. Fruit conspicuous, oval white berries each with dark spot, in raceme on thick red stalks. Late summer.

3. Upright shrubs.

RED OSIER DOGWOOD (*Cornus stolonifera*). Dogwood family.

Rather tall shrub; leaves egg-shaped, not toothed, short pointed, somewhat rough, somewhat white beneath, with slender stalks. Fruit in terminal clusters.

PANICLED DOGWOOD (*Cornus paniculata*). Dogwood family.

Rather tall shrub; leaves short, broadly egg-shaped or lance-shaped, not toothed, tapering to point. Fruit in rounded terminal clusters. Late summer.

POISON SUMAC (*Rhus venenata*). Cashew family.

Max. ht. 18 ft.; leaves compound, leaflets 7-13, egg-shaped-oblong, not toothed. Fruit small, globular, clustered in axils. Late summer.

Fig. 82.



Bayberry (*Myrica cerifera*).

BAYBERRY (*Myrica cerifera*). Sweet-Gale family.

Shrub 2-6 ft. or over; leaves alternate, inversely egg-shaped, toothed, on short stalks. Fruit (drupe) small, round, thickly clustered on short stalks, with white waxy coating. Sandy ground on coast.

BLUE FRUIT

BLUE FRUIT

Upright ———— — [over 3 ft. ————] ——— [leaves opposite (1)]
Climbing (4) [not over 3 ft. (3)] [leaves alternate (2)]

BLUE FRUIT

1. Tall plants, leaves opposite.

BLACK HAW (*Viburnum prunifolium*). Honeysuckle family.

Tall shrub or small tree; leaves short stemmed, oval, obtusely pointed, fine-toothed. Fruit (drupe) berry-like, oval (black or) with bluish bloom, in terminal clusters. Early autumn.

WITHE-ROD (*Viburnum cassinoides*). Honeysuckle family.

Rather tall shrub; leaves oval or pointed, with *fine rounded teeth*, or *without teeth*. Fruit (drupe) berry-like, round or ovoid, dark blue or blackish (at first pink), different colors in same cluster. Late summer.

ARROW-WOOD (*Viburnum dentatum*). Honeysuckle family.

Rather tall shrub; leaves egg-shaped, pointed, somewhat heart-shaped at base, *coarsely* toothed. Fruit (drupe) small, dark-blue, in flat terminal clusters. Late summer.

ROUND-LEAVED DOGWOOD (*Cornus circinata*). Dogwood family.

Rather tall shrub; leaves round-oval, short pointed, woolly beneath, short stalked. Fruit (drupe), light blue, berry-like, in spreading terminal clusters. Early autumn.

2. Tall plants, leaves not opposite.

ALTERNATE-LEAVED DOGWOOD (*Cornus alternifolia*).

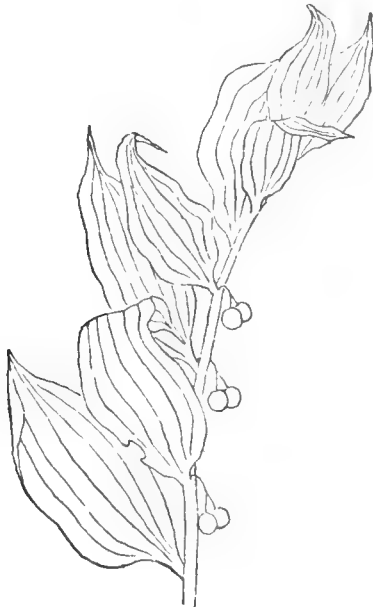
Dogwood family.

Tall shrub; leaves thickly set at top, egg-shaped or oval, long pointed. Fruit (drupe) dark-blue on red stalks, in irregular terminal clusters. Late summer.

DANGLEBERRY (*Gaylussacia frondosa*). Heath family.
Max. ht. 6 ft.; leaves egg-shaped to oblong, *pale*,
with bloom beneath. Fruit large blue berry with
whitish bloom, sweet and edible, in loose slender
clusters. Midsummer.

HIGH-BUSH BLUEBERRY (*Vaccinium corymbosum*).
Heath family.
Tall shrub; leaves alternate. Fruit a sweet edible
berry. Midsummer.

Fig. 83.

Solomon's seal (*Polygonatum biflorum*).

3. Plants under 3 ft.

LOW BLUEBERRY (*Vaccinium vacillans*). Heath family.
Max. ht. 4 ft.; leaves inversely egg-shaped or oval,
blunt-pointed at both ends. Fruit large blue
berry, sweet and edible. Summer, early autumn.

BLUE COHOSH (*Caulophyllum thalictroides*). Barberry fam.
Max. ht. 2½ ft.; leaves thrice compound; leaflets
inversely egg-shaped, lobed. Fruit bluish, berry-
like, in terminal clusters.

SOLOMON'S SEAL (*Polygonatum biflorum*). Lily family.

Av. ht. 2 ft.; leaves egg-shaped—oblong, or lance-shaped, practically without stalks. Fruit dark-blue berries with bloom, from axils, one or two on drooping stalks, each 3-celled, 1 to several seeds. Late summer, early autumn.

CLINTONIA BOREALIS. Lily family.

Leafless stem under 1 ft.; leaves, from base of plant, large, oblong or egg-shaped. Fruit a blue berry with many seeds, generally several at top of stem in umbel. Late summer.

4. Climbing.

WOODBINE. VIRGINIA CREEPER (*Ampelopsis quinquefolia*). Vine family.

Climbing by tendrils; leaves of 5 leaflets. Fruit a small berry (blue or black) loosely clustered, on stout and stiff red stalks. Autumn. (See illustration under Black Fruit 1).

BLACK FRUIT

BLACK FRUIT

Trailing, climbing	<input type="checkbox"/> leaves compound (1) <input type="checkbox"/> leaves simple (2)
Tall plants (over 3 ft.)	<input type="checkbox"/> leaves opposite (3) <input type="checkbox"/> leaves alternate (4)
Low plants (under 3 ft.)	<input type="checkbox"/> leaves whorled (5) <input type="checkbox"/> leaves otherwise (6)

BLACK FRUIT

1. Trailing, climbing, leaves compound.

RUNNING SWAMP BLACKBERRY (*Rubus hispidus*). Rose family.

Slender stem with *backward bending* prickles; leaflets 3 (rarely 5) inversely heart-shaped, coarsely toothed. Fruit sparse, nearly black when ripe, containing few grains. Late summer.

Fig. 84.



Virginia creeper (*Ampelopsis quinquefolia*).

LOW BLACKBERRY (*Rubus Canadensis*). Rose family. Trailing over rocks, etc.; *few prickles*. Fruit black, in raceme.

VIRGINIA CREEPER. WOODBINE (*Ampelopsis quinquefolia*). Vine family.

Climbing by tendrils; leaves of *five leaflets*. Fruit a small berry, loosely clustered. Autumn.

2. Trailing, climbing, leaves simple.

MOONSEED (*Menispermum Canadense*). Moonseed family.

A climber; leaves broad, with delicate stalks, 3- to 7-angled or lobed, shield-formed with stalk attached to under surface. Fruit (drupe) berry-like, black, with bloom, in loose clusters. Early autumn.

CARRION-FLOWER (*Smilax herbacea*). Lily family.

Stem smooth; leaves somewhat heart-shaped, obtusely pointed. Fruit black berry, with bloom, round and flat, in close round clusters on long stalks. Late summer.

GLAUCOUS-LEAVED GREENBRIER (*Smilax glauca*).

Smilax family.

Long vine, climbing by tendrils, sometimes with prickles; leaves oval, white underneath. Fruit in umbel on flat stalks from axils, seeds 1-3. Early autumn.

GREENBRIER (*Smilax rotundifolia*). Smilax family.

Stem yellow-green with prickles, branches more or less 4-sided; leaves pointed, with base round or heart-shaped, green above and below. Fruit same as above. Moist ground. Early autumn.

3. Plants over 3 ft., leaves opposite.

BLACK HAW (*Viburnum prunifolium*). Honeysuckle family.

Tall shrub or small tree; leaves short stemmed, oval, obtusely pointed, fine-toothed. Fruit (drupe) berry-like, oval (black or with bluish bloom), in terminal clusters. Early autumn.

WITHE-ROD (*Viburnum cassinoides*). Honeysuckle family.

Rather tall shrub; leaves oval or pointed, with fine rounded teeth, or without teeth. Fruit (drupe) berry-like, round or ovoid, dark blue or blackish (at first pink), different colors in same cluster. Late summer.

SWEET VIBURNUM. NANNY-BERRY (*Viburnum Lentago*).

Honeysuckle family.

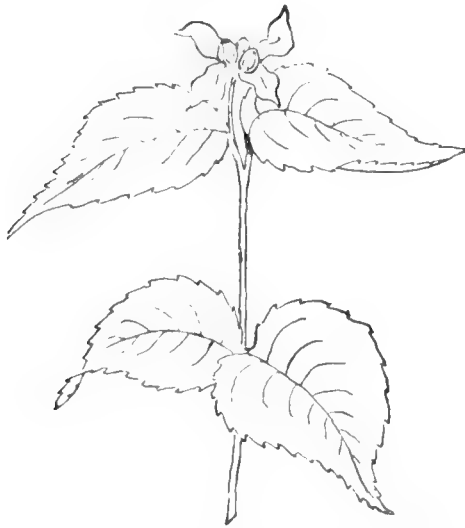
Tall shrub; leaves broadly oval, with sharp points and close pointed teeth; leaf-stalks with margins. Fruit ovoid, *at first crimson*, then black or dark purple, with crimson and black in same cluster; *stigma projecting* from tip of fruit; fruit on slender *red stalks*. Stone flattened, blunt pointed, *grooved on both sides*. Woods and river banks. Early autumn.

MAPLE-LEAVED VIBURNUM (*Viburnum acerifolium*).

Honeysuckle family.

Ht. several ft.; *straggly growth*; leaves of 3 lobes, lobes pointed, *irregularly toothed*. Fruit black drupes in flat cluster at end of branch, oval, slightly flattened, thin pulp, stone rounded, one side with two shallow grooves. Late summer.

Fig. 85.



Involucre fly-honeysuckle (*Lonicera involucrata*).

INVOLUCRED FLY-HONEYSUCKLE (*Lonicera involucrata*).

Honeysuckle family.

Shrub, 3-6 ft. or over; leaves long, pointed, toothed. Fruit terminal and axillary, few distinct berries close together at end of one stalk, and surrounded by long, pointed leaves (bracts). Woody country.

4. Plants over 3 ft., leaves alternate.

SPIKENARD (*Aralia racemosa*). Ginseng family.

Ht. several ft.; leaves *compound*, leaflets *heart-shaped*, toothed and pointed. Fruit black (or red or dark purple), berry-like, small, many in a long cluster. Roadsides. Early autumn.

HIGH BLACKBERRY (*Rubus villosus*). Rose family.

Shrub, max. ht. 6 ft., with stout prickles. Fruit in raceme. Midsummer.

RUM CHERRY (*Prunus serotina*). Plum family.

Tall tree; leaves alternate, dark, glossy, white beneath, egg-shaped, pointed, toothed. Bark reddish when young, nearly black later. Fruit (drupe) in loose, pendant clusters, each rounded, with depression at top. Late summer.

5. Plants not over 3 ft., leaves whorled.

INDIAN CUCUMBER-ROOT (*Medeola Virginiana*). Lily family.

Ht. abt. 2 ft.; leaves in *two whorls*, lower 5-9 inversely egg-lance-shaped, pointed, without stalks; upper of 3 (occasionally more), egg-shaped. Fruit a few (3-5) purple, or black, berries, clustered on red stalks, at top of stem, seeds 1-3. Early autumn.

6. Plants not over 3 ft., leaves not whorled.

WILD SARSAPARILLA (*Aralia nudicaulis*). Ginseng family.

Stem 1 ft. high, with a long-stalked leaf of many pointed leaflets. Fruit on a leafless stem, small, berry-like (drupes), in umbel, color black (or dark purple). Midsummer.

HUCKLEBERRY (*Gaylussacia resinosa*). Heath family.

Shrub, ht. 1-few ft.; leaves oval-egg-shaped. Fruit black, without bloom, edible, in short raceme-like clusters. Midsummer.

BOG BILBERRY (*Vaccinium uliginosum*). Heath family.
Ht. 2 ft. or under; spreading; *leaves without teeth*,
inversely egg-shaped or oblong, pale. Fruit berry,
sweet, black, with bloom, solitary or two or three
on short stalks. Midsummer.

Fig. 86.

Black crowberry (*Empetrum nigrum*).

CHOKEBERRY (*Pyrus arbutifolia*). Rose family.
Ht. 1 ft. or over; leaves oblong or inversely lance-
shaped, mostly pointed. Fruit (pome) berry-like,
pear-shaped or round, dark red or blackish in
clusters.

BLACK CROWBERRY (*Empetrum nigrum*). Crowberry
family.

Low, spreading shrub with delicate stems and
linear leaves closely set. Fruit a globular berry.

PURPLE FRUIT

PURPLE FRUIT

Plants over 2 ft. ————— [leaves compound (1)
leaves simple (2)
Plants not over 2 ft. (3)

PURPLE FRUIT

1. Plants over 2 ft., leaves compound.

ELDER (*Sambucus Canadensis*). Honeysuckle family.
Ht. few-10 ft.; leaflets 5-11, toothed, oblong. Fruit (drupe) small, dark purple, in terminal drooping clusters. Rich ground. Early autumn.

SPIKENARD (*Aralia racemosa*). Ginseng family.
Ht. several ft.; leaflets heart-shaped, with double teeth. Fruit red (or dark purple or black), berry-like, small, many in a long cluster. Early autumn.

2. Plants over 2 ft., leaves simple.

POKE (*Phytolacca decandra*). Poke-weed family.
Tall perennial herb, stout, spreading, with red or purple stem; leaves large, pointed, sometimes 1 ft. long. Fruit conspicuous dark purple flattened berries in long racemes, terminal or opposite the leaves. Common. Early autumn.

MAPLE-LEAVED VIBURNUM. DOCKMACKIE (*Viburnum acerifolium*). Honeysuckle family.
Ht. several ft., straggly growth; leaves of 3 lobes, lobes pointed, irregularly toothed. Fruit (drupe) berry-like, crimson (turning purple), in flat terminal clusters.

BEACH PLUM (*Prunus maritima*). Rose family.
Ht. several ft.; petals 5; leaves oval or egg-shaped, with teeth; straggly growth. Fruit (drupe) on slender stalk, roundish, purple with a bloom, clustered. Late summer.

3. Plants not over 2 ft.

WILD SARSAPARILLA (*Aralia nudicaulis*). Ginseng family.

Stem 1 ft. high, with a long-stalked leaf of many pointed leaflets. Fruit on a leafless stem, small, berry-like (drupes), in umbel, color black or dark-purple. Midsummer.

LARGER WHITE TRILLIUM (*Trillium grandiflorum*). Lily family.

Av. ht. 1 ft.; leaves (3) egg-shaped, pointed. Fruit a large egg-shaped berry.

INDIAN CUCUMBER-ROOT (*Medeola Virginiana*). Lily family.

Ht. abt. 2 ft.; leaves in 2 whorls, lower (5-9) inversely egg-lance-shaped, pointed, without stalks; upper (3, occasionally more), egg-shaped. Fruit a few (3-5) purple, or black, berries, clustered on red stalks, at top of stem, seeds 1-3. Early autumn.

GREEN, GREENISH OR
YELLOWISH FRUIT

SPECKLED FRUIT

GREEN, GREENISH OR YELLOWISH FRUIT

Fruit large (1).

Fruit small (2).

1. Fruit large.

MAY APPLE (*Podophyllum peltatum*). Barberry family.
Ht. 1 ft.; flower-stem with few large leaves; *flowerless stem ending in a large (1 ft.) round, lobed leaf, leaf-stalk inserted in the middle like an umbrella.*
Fruit large, egg-shaped, yellowish, edible. Midsummer.

THORN APPLE (*Datura Stramonium*). Nightshade family.
Ht. several ft., a rank, bad smelling weed; leaves rather large. Fruit somewhat egg-shaped, with long prickles, growing from fork.

WILD BALSAM-APPLE (*Echinocystis lobata*). Gourd family.
Tall annual, climbing by tendrils; leaves thin, with 5 lobes. Fruit green, 2 in. long, with delicate prickles.

2. Fruit small.

SQUAW HUCKLEBERRY (*Vaccinium stamineum*). Heath family.
Fine-hairy; widely branched; leaves egg-shaped or oval, pale. Fruit a large rounded or pear-shaped greenish or yellowish few-seeded berry, in raceme. Early autumn.

GROUND CHERRY (*Physalis Virginiana*). Nightshade family.
Branched and spreading; *leaves large and broad.* Fruit a yellow berry enveloped in calyx, solitary on nodding stalks.

GROUND-NUT (*Aralia trifolia*). Ginseng family.

Ht. few inches; leaves 3 in whorl below fruit, each divided into 3-5 leaflets. Fruit yellow berry, in umbel at end of stem, few seeded.

BITTER-SWEET (*Celastrus scandens*). Staff-tree family.

Twining shrub; leaves egg-shaped-oblong, with teeth. Fruit rounded, berry-like, curling back finally in 3 divisions when ripe so as to show the red covering of the seeds. Early autumn.

SPECKLED FRUIT

WILD LILY-OF-THE-VALLEY (*Maianthemum Canadense*).

Lily family.

Ht. few in.; leaves two or three, long, pointed, *heart-shaped at base*, without stalks or with very short ones. Fruit finally a red berry (at first only speckled with red) in terminal raceme.

FALSE SOLOMON'S SEAL (*Smilacina racemosa*). Lily family.

Av. ht. 2 ft.; leaves long, pointed, with parallel veins. Fruit a round berry finally dull-red, earlier white, with red speckles; Fruit in a terminal cluster (compound raceme). Early autumn.

INDEX

Y.....	Yellow Flowers
W.....	White Flowers
G.....	Green Flowers
R.....	Red Flowers
Pk.....	Pink Flowers
Pl.....	Lavender to Purple Flowers
B.....	Blue Flowers
Br.....	Brownish and Variegated Flowers
R Fr.....	Red Fruits
W Fr.....	White Fruits
B Fr.....	Blue Fruits
Blk Fr.....	Black Fruits
Pl Fr.....	Purple Fruits
Spk Fr.....	Speckled Fruits
G Fr.....	Green and Yellowish Fruits

	PAGE
<i>Abutilon Avicennae</i> , Y 27	51
<i>Achillea Millefolium</i> , W 38.....	79
<i>Aconitum uncinatum</i> , Pl 19.....	145
<i>Actaea alba</i> , W 34, W Fr 2	76, 175
<i>rubra</i> , W 34, R Fr 4	76, 167
Adder's Mouth, Pk 24.....	131
Green, W 45	85
Tongue, Yellow, Y 18	42
<i>Adlumia cirrhosa</i> , Pk 14.....	123
<i>Agrimonia Eupatoria</i> , Y 13.....	38
Agrimony, Y 13.....	38
Alder, Black, W 54, R Fr 3	92, 166
<i>Alctris farinosa</i> , W 22.....	69
<i>Alisma Plantago</i> , W 26	72
<i>Allium tricoccum</i> , W 31.....	75
<i>Ambrosia artemisiaefolia</i> , G 3	102
<i>Amelanchier Canadensis</i> , W 46, R Fr 4	86, 167
<i>Ampelopsis quinquefolia</i> , B Fr 4	185
<i>Amphicarpaea monoica</i> , Pl 10.....	141

	PAGE
<i>Anagallis arvensis</i> , R 1.....	107
<i>Anaphalis margaritacea</i> , W 58.....	96
<i>Andromeda Mariana</i> , W 55.....	94
Marsh, W 55.....	93
<i>polifolia</i> , W 55.....	93
<i>Anemone</i> , Canada, W 15.....	66
<i>cylindrica</i> , W 15.....	66
Long-fruited, W 15.....	66
<i>nemorosa</i> , W 15.....	65
<i>Pennsylvanica</i> , W 15.....	66
Rue, W 16.....	66
<i>Virginiana</i> , W 15.....	66
Wood, W 15.....	65
<i>Anemonella thalictroides</i> , W 16.....	66
<i>Angelica atropurpurea</i> , W 37.....	79
Purple-stemmed, W 37.....	79
<i>Antennaria plantaginifolia</i> , W 58.....	95
<i>Anthemis Cotula</i> , W 41.....	82
<i>Aphyllon uniflorum</i> , Pl 13.....	141
<i>Apios tuberosa</i> , Br 1.....	161
<i>Apocynum androsaemifolium</i> , Pk 9.....	118
<i>Aquilegia Canadensis</i> , R 6.....	110
<i>Arabis hirsuta</i> , W 60.....	97
<i>Aralia hispida</i> , W 37.....	79
<i>nudicaulis</i> , W 35, Blk Fr 6.....	78, 188
<i>quinquefolia</i> , W 16.....	66
<i>racemosa</i> , W 40, Pl Fr 1.....	81, 193
<i>trifolia</i> , W 16, G Fr 2.....	66, 198
<i>Arbutus</i> , Trailing, Pk 14.....	122
<i>Arctium Lappa</i> , Pl 26.....	146
<i>Arctostaphylos Uva-ursi</i> , W 51, R Fr 6.....	90, 167
<i>Arenaria Groenlandica</i> , W 5.....	59
<i>lateriflora</i> , W 5.....	59
<i>Arethusa</i> , Pl 16.....	143
<i>bulbosa</i> , Pl 16.....	143
<i>Arisaema triphyllum</i> , Br 3, R Fr 5.....	161, 167
<i>Aristolochia Serpentaria</i> , G 5.....	103
Arrowhead, W 20.....	68
-wood, W 10, B Fr 1.....	64, 179
<i>Artemisia caudata</i> , G 6.....	103

INDEX

201

	PAGE
Arum, Water, W 20.....	67
<i>Asarum Canadense</i> , Br 2.....	161
<i>Asclepias Cornuti</i> , Pk 2.....	113
<i>incarnata</i> , Pk 2.....	114
<i>purpurascens</i> , Pk 2.....	114
<i>quadrifolia</i> , Pk 12.....	121
<i>tuberosa</i> , R 5.....	109
<i>verticillata</i> , G 4.....	102
<i>Ascyrum Crux-Andreeae</i> , Y 6.....	33
Asparagus, Y 27.....	51
<i>officinalis</i> , Y 27.....	51
Aster, Golden, Y 20.....	43
<i>patens</i> , B 15.....	156
Asters, Blue, B 15.....	155
Purple, Pl 20.....	145
White, W 57.....	95
Avens, Purple, Pl 18.....	144
White, W 41.....	81
Yellow, Y 14.....	40
Azalia, Clammy, W 54.....	92
Pink, Pk 15.....	123
<i>Baccharis halimifolia</i> , W 54.....	92
Baked-apple Berry, W 48.....	88
Balsam-apple, Wild, W 44, G Fr 1.....	83, 197
Baneberry, Red, W 34, R Fr 4.....	76, 167
White, W 34, W Fr 2.....	76, 175
<i>Baptisia tinctoria</i> , Y 11.....	38
<i>Barbarca vulgaris</i> , Y 28.....	51, 52
Barberry, Y 15.....	41
Basil, Pk 1.....	113
Bayberry, W Fr 3.....	176
Bay, Sweet, W 47.....	87
Beach Pea, Pl 10.....	140
Beach Plum, W 56, Pl Fr 2.....	94, 193
Bean, Wild, Pl 12, Br 1.....	141, 161
Bearberry, W 51, R Fr 6.....	90, 167
Beard-tongue, Pl 8.....	140
White, W 7.....	60
Bedstraw, W 11.....	64

	PAGE
Bedstraw, Rough, W 11.....	65
Small, W 11.....	64
Bee Balm, R 1.....	107
Beech Drops, Br 3.....	162
<i>Belamcanda Chinensis</i> , Y 18.....	43
Bell-flower, European, B 20.....	158
Bellwort, Y 25.....	48
<i>Berberis vulgaris</i> , Y 15.....	41
Bergamot, Wild, Pl 2.....	135
Betony, Wood, Y 23.....	47
<i>Bidens cernua</i> , Y 1.....	29
<i>chrysanthemoides</i> , Y 1.....	30
<i>frondosa</i> , Y 1.....	29
Bilberry, Bog, W 49, Blk Fr 6.....	88, 189
Bindweed, W 49.....	89
Bishop-weed, Mock, W 36.....	78
Bitter-sweet, G 8, R Fr 6.....	104, 168
Blackberry, High, Blk Fr 4.....	188
Low, W 41, Blk Fr 1.....	81, 185
Running Swamp, W 41, Blk Fr 1.....	81, 185
Black-eyed Susan, Y 20.....	43
Black Haw, W 10, Blk Fr 3.....	63, 187
Bladder Campion, W 7.....	61
Bladderwort, Y 9.....	36
Blazing Star, Pl 21.....	145
Blood-root, W 30.....	74
Blue Bells, B 18.....	157
Blueberry, High-bush, W 53, B Fr 2.....	92, 180
Low, W 55, B Fr 3.....	93, 180
Blue Curls, Pl 5.....	138
Blue-eyed Grass, B 12.....	154
Blue Flag, Larger, Pl 16.....	143
Bluets, B 4.....	151
Blueweed, B 19.....	154
Bog Bilberry, W 49, Blk Fr 6.....	88, 189
Boneset, W 7.....	60
Bouncing Bet, Pk 8, W 7.....	117
<i>Brasenia peltata</i> , Pl 14.....	142
<i>Brassica nigra</i> , Y 28.....	52
<i>Sinapistrum</i> , Y 28.....	52

INDEX

203

	PAGE
Brooklime, B 1.....	150
<i>Brunella vulgaris</i> , Pl 3.....	137
Buck-bean, W 24.....	70
Buckwheat, Climbing False, W 44.....	83
Bugle-weed, W 1.....	58
Bunchberry, W 13, R Fr 7.....	65, 168
Bunch-flower, W 62.....	98
Burdock, Pl 26.....	146
Bur-marigold, Y 1.....	29
Larger, Y 1.....	30
Smaller, Y 1.....	29
Burnet, Great, W 33.....	76
Bur-reed, Branching, Br 3.....	162
Butter and Eggs, Y 29.....	53
Buttercup, Y 27.....	50
Bulbous, Y 10.....	36
Butterfly-pea, B 9.....	153
-weed, R 5.....	109
Button-bush, W 3.....	58
<i>Cakile Americana</i> , Pl 25.....	146
<i>Calamintha Clinopodium</i> , Pk 1.....	113
<i>Calla palustris</i> , W 20.....	67
<i>Calopogon pulchellus</i> , Pk 20.....	128
<i>Caltha palustris</i> , Y 27.....	50
Calypso, Pk 24.....	130
<i>borealis</i> , Pk 24.....	130
<i>Campanula rapunculoides</i> , B 20.....	158
<i>rotundifolia</i> , B 21.....	158
Campion, Bladder, W 7.....	61
Starry, W 17.....	67
Cancer-root, One-flowered, Pl 13.....	141
<i>Capsella Bursa-pastoris</i> , W 45.....	85
Caraway, W 36.....	78
<i>Cardamine hirsuta</i> , W 34.....	76
<i>rhomboidea</i> , W 60.....	97
Cardinal-flower, R 6.....	110
Carrion-flower, G 8, Blk Fr 2.....	104, 186
Carrot, Wild, W 36.....	78
<i>Carum Carui</i> , W 36.....	78

	PAGE
<i>Cassandra calyculata</i> , W 46	86
<i>Cassia Chamaecrista</i> , Y 13	39
<i>Marylandica</i> , Y 13	39
<i>Cassiope hypnoides</i> , W 50	89
<i>Castelleja coccinea</i> , R 5	109
Catchfly, Night-flowering, W 6	60
<i>Caulophyllum thalictroides</i> , G 6, B Fr 3	103, 180
<i>Ceanothus Americanus</i> , W 56	94
Celandine, Y 8	35
Poppy, Y 26	49
<i>Celastrus scandens</i> , G 8, R Fr 6	104, 168
Centaury, Spiked, Pk 11	119
<i>Cephalanthus occidentalis</i> , W 3	58
<i>Cerastium arvense</i> , W 5	59
<i>Chamaelirium Carolinianum</i> , W 45	85
Chamomile, W 41	82
Cheeses, W 49	89
<i>Chelidonium majus</i> , Y 8	35
<i>Chelone glabra</i> , W 7	61
<i>Chenopodium Botrys</i> , G 2	102
Cherry, Ground, W 49, G Fr 2	89, 197
Rum, Blk Fr 4	188
Chickweed, Common, W 5	59
Field, W 5	59
Chicory, B 16	156
<i>Chimaphila maculata</i> , W 18	67
<i>umbellata</i> , W 18	67
<i>Chiognes serpyllifolia</i> , W 49, W Fr 1	88, 175
Chokeberry, W 56, R Fr 10	94, 171
Choke-cherry, W 46, R Fr 4	86, 167
<i>Chrysanthemum Leucanthemum</i> , W 47	87
<i>Chrysopsis Mariana</i> , Y 20	43
Cicely, Sweet, W 37	78
<i>Cichorium Intybus</i> , B 16	156
<i>Cicuta maculata</i> , W 37	79
<i>Cimicifuga racemosa</i> , W 34	77
Cinquefoil, Common, Y 14	39
Shrubby, Y 14	40
Silvery, Y 14	40
Three-toothed, W 39	80

INDEX

205

	PAGE
<i>Circaea Lutetiana</i> , W 4	58
<i>Claytonia Virginica</i> , Pk 8	116
Cleavers, W 11	64
<i>Clematis verticillaris</i> , W 2	138
<i>Virginiana</i> , Pl 5	58
<i>Clethra alnifolia</i> , W 46	86
<i>Clintonia borealis</i> , Y 18, B Fr 3	42, 181
<i>Clitoria Mariana</i> , B 9	153
Cloud-berry, W 48, R Fr 1	88, 165
Clover, Alsatian, Pk 22	128
Bush, Pk 14, P 21	123
Hairy Bush, Pk 16	125
Rabbit-foot, Pk 22	129
Red, R 5	109
White, W 41	87
White Sweet, W 34	77
Yellow, Y 10	37
Yellow Sweet, Y 11	37
<i>Cnicus horridulus</i> , Y 21	44
<i>muticus</i> , Pl 19	145
Cockspur Thorn, W 52, R Fr 8	91, 169
Cohosh, Black, W 34	77
Blue, G 6, B Fr 3	103, 180
Colic-root, W 22	69
<i>Collinsia verna</i> , Pl 4	138
<i>Collinsonia Canadensis</i> , Y 3	31
Coltsfoot, Y 16	41
Columbine, Wild, R 6	110
<i>Comandra umbellata</i> , W 59	96
<i>Commelina Virginica</i> , B 22	158
Cone-flower, Y 12	38
Conrad's Broom, Pl 23	146
<i>Convolvulus Americanus</i> , Pk 14	123
<i>arvensis</i> , W 49	89
<i>Coptis trifolia</i> , W 29	74
<i>Corema Conradii</i> , Pl 23	146
Corn-cockle, Pl 6	139
<i>Cornus alternifolia</i> , W 54, B Fr 2	92, 179
<i>Canadensis</i> , W 13, R Fr 7	65, 168
<i>circinata</i> , W 9, B Fr 1	62, 179

	PAGE
<i>Cornus florida</i> , W 6, R Fr 9	60, 170
<i>paniculata</i> , W 9, W Fr 3	63, 176
<i>stolonifera</i> , W 9, W Fr 3	63, 175
Corpse-plant, W 32	75
<i>Corydalis aurea</i> , Y 9	35
<i>glauca</i> , Pk 21	128
Golden, Y 9	35
Pale, Pk 21	128
Cowbane, Spotted, W 37	79
Cow Parsnip, W 37	79
Cow-wheat, Y 6	33
Cranberry, Pk 14, R Fr 2	123, 165
Small, Pk 14, R Fr 2	123, 165
-tree, W 8	62
Crane's-bill, Pl 6	139
<i>Crataegus coccinea</i> , W 52, R Fr 8	91, 169
<i>Crus-galli</i> , W 52, R Fr 8	91, 169
Cress, Rock, W 60	97
Small Bitter, W 34	76
Spring, W 60	97
Water, W 34	77
Crinkle-root, W 39	80
<i>Crotalaria sagittalis</i> , Y 27	51
Crowberry, Pl 23	146
Black, Pl 26, Blk Fr 6	146, 189
Crowfoot, Early, Y 10	36
Small-flowered, Y 27	50
White Water, W 20	68
Yellow Water, Y 9	36
Crow-toe, Y 10	37
<i>Cryptotaenia Canadensis</i> , W 37	79
Culver's-root, W 19	67
<i>Cunila Mariana</i> , Pl 8	140
<i>Cuphea viscosissima</i> , Pk 4	114
<i>Cuscuta Gronovii</i> , W 32	75
<i>Cynoglossum officinale</i> , R 5	109
Cynthia, Y 16	41
<i>Cypripedium acaule</i> , Pk 24	130
<i>pubescens</i> , Y 27	50
<i>spectabile</i> , Pk 25	131

	PAGE
Daisy Fleabane, W 57.....	95
Ox-eyed, W 47.....	87
White, W 47.....	87
<i>Dalibarda repens</i> , W 28.....	72
Dandelion, Y 16.....	41
Fall, Y 16.....	41
Dangleberry, W 46, B Fr 2.....	86, 180
<i>Datura Stramonium</i> , W 47, G Fr 1.....	87, 197
<i>Daucus Carota</i> , W 36.....	78
Day-flower, B 22.....	158
<i>Delphinium exaltatum</i> , B 14.....	155
<i>tricornis</i> , B 14.....	155
<i>Dentaria diphylla</i> , W 39.....	80
<i>Desmodium acuminatum</i> , Pk 18.....	126
<i>Canadense</i> , Pk 18.....	126
<i>Dellenii</i> , Pk 18.....	127
<i>nudiflora</i> , Pk 18.....	126
Devil's-bit, W 45.....	85
Devil's Paint-brush, R 5.....	109
<i>Dianthus Armeria</i> , Pk 5.....	115
<i>Dicentra Cucullaria</i> , W 24.....	70
<i>Dicrvillea trifida</i> , Y 4.....	32
<i>Diphylleia cymosa</i> , W 62.....	98
<i>Dirca palustris</i> , Y 27.....	50
<i>Discopleura capillacea</i> , W 36.....	78
Ditch Stonecrop, G 2.....	101
Dittany, Pl 8.....	140
Dock, Curled, G 3.....	102
Great Water, G 5.....	103
Dockmackie, W 8, Pl Fr 2.....	62, 193
Dodder, W 32.....	75
<i>Dodecatheon Meadia</i> , Pl 17.....	143
Dogbane, Spreading, Pk 9.....	118
Dogwood, G 1.....	101
Alternate-leaved, W 54, B Fr 2.....	92, 179
Flowering, W 6, R Fr 9.....	60, 170
Panicled, W 9, W Fr 3.....	63, 176
Red-osier, W 9, W Fr 3.....	63, 175
Round-leaved, W 9, B Fr 1.....	62, 179
<i>Draba verna</i> , W 23.....	70

	PAGE
<i>Drosera filiformis</i> , Pk 17.....	125
<i>rotundifolia</i> , W 23.....	70
Dutchman's-breeches, W 24.....	70
<i>Echinocystis lobata</i> , W 44, G Fr 1.....	83, 197
<i>Echium vulgare</i> , B 19.....	157
Elder, Common, W 8, Pl Fr 1.....	62, 193
Marsh, G 1.....	101
Red-berried, W 8, R Fr 9.....	62, 170
Elecampane, Y 21.....	44
<i>Elodes campanulata</i> , Pk 8.....	117
<i>Empetrum nigrum</i> , Pl 26, Blk Fr 6.....	146, 189
Enchanter's Nightshade, W 4.....	58
<i>Epigea repens</i> , Pk 14.....	122
<i>Epilobium angustifolium</i> , Pk 18.....	126
<i>coloratum</i> , Pk 11.....	120
<i>hirsutum</i> , Pk 23.....	130
<i>Epiphegus Virginiana</i> , Br 3.....	162
<i>Erigenia bulbosa</i> , W 35.....	77
<i>Erigeron annuus</i> , W 57.....	95
<i>bellidifolius</i> , B 15.....	155
<i>Canadensis</i> , W 57.....	95
<i>Philadelphicus</i> , Pk 19.....	127
<i>Eriocaulon septangulare</i> , W 20.....	68
<i>Erythraea spicata</i> , Pk 11.....	119
<i>Erythronium Americanum</i> , Y 18.....	42
<i>Eupatorium ageratoides</i> , W 7.....	61
<i>perfoliatum</i> , W 7.....	60
<i>purpureum</i> , Pk 12.....	121
<i>Euphorbia corollata</i> , W 61.....	97
<i>Euphrasia officinalis</i> , Pl 3.....	137
Evening Primrose, Y 23.....	47
Everlasting, Common, W 58.....	95
Pearly, W 58.....	96
Plantain-leaved, W 58.....	95
Eyebright, Pl 3.....	137
Fever-bush, Y 30.....	54
Feverwort, Br 3, R Fr 3.....	162, 166
Fire Pink, R 1.....	108

INDEX

209

	PAGE
Fire-weed, Pk 18.....	126
Fleabane, Daisy, W 57.....	95
Philadelphia, Pk 19.....	127
Salt-marsh, Pk 19.....	127
Fleur-de-lis, Pl 16.....	142
Floating Heart, W 20.....	68
Foam-flower, W 23.....	70
Forget-me-not, B 7.....	152
Foxglove, Downy False, Y 2.....	30
Fern-leaved False, Y 2.....	31
Smooth False, Y 2.....	30
<i>Fragaria Americana</i> , W 28.....	73
<i>Canadensis</i> , W 28.....	73
Fumitory, Climbing, Pk 14.....	123
<i>Galeopsis Tetrahit</i> , Pk 1.....	113
<i>Galium Aparine</i> , W 11.....	64
<i>asprellum</i> , W 11.....	65
<i>trifidum</i> , W 11.....	64
Garget, W 46.....	86
<i>Gaultheria procumbens</i> , W 48, R Fr 3.....	88, 165
<i>Gaylussacia frondosa</i> , W 46, B Fr 2.....	86, 180
<i>resinosa</i> , W 55, Blk Fr 6.....	93, 188
<i>Genista tinctoria</i> , Y 29.....	53
Gentian, Closed, B 6.....	152
Five-flowered, B 6.....	152
Fringed, B 4.....	151
Horse, Br 3, R Fr 3.....	162, 166
<i>Gentiana Andrewsii</i> , B 6.....	152
<i>angustifolia</i>	151
<i>crinita</i> , B 4.....	151
<i>quinqueflora</i> , B 6.....	152
<i>Geranium maculatum</i> , Pl 6.....	139
<i>Robertianum</i> , Pk 5.....	115
Wild, Pl 6.....	139
<i>Gerardia flava</i> , Y 2.....	30
<i>maritima</i> , Pk 10.....	119
<i>pedicularia</i> , Y 2.....	31
Purple, Pk 10.....	119
<i>purpurea</i> , Pk 10.....	119
<i>quercifolia</i> , Y 2.....	30

	PAGE
Gerardia, Seaside, Pk 10	119
Slender, Pk 10	119
<i>tenuifolia</i> , Pk 10	119
<i>Geum album</i> , W 41	81
<i>rivale</i> , Pl 18	144
<i>strictum</i> , Y 14	40
Gill-over-the-ground, B 5	152
Ginger, Wild, Br 2	161
Ginseng, W 16	66
Dwarf, W 16	66
<i>Gnaphalium polycephalum</i> , W 58	95
Goat's Rue, Y 12, Pl 19	38, 144
Golden-club, Y 17	42
Ragwort, Y 22	45
-rod, Blue-stemmed, Y 22	46
Canadian, Y 20	44
Early, Y 22	46
Elm-leaved, Y 22	47
Sea-side, Y 21	45
Gold-thread, W 29	74
<i>Goodyera pubescens</i> , W 21	69
Grass of Parnassus, W 28	73
<i>Gratiola Virginiana</i> , Y 6	34
Great Burnet, W 33	76
Greenbrier, Blk Fr 2	186
Glaucus-leaved, Blk Fr 2	186
Ground Cherry, W 49, G Fr 2	89, 197
-nut, Br 1, G Fr 2	161, 198
Groundsel-tree, W 54	92
<i>Habenaria blephariglottis</i> , W 43	83
<i>dilatata</i> , W 43	83
<i>fimbriata</i> , Pl 24	146
<i>orbiculata</i> , W 22	69
<i>Hamamelis Virginiana</i> , Y 30	54
Harbinger-of-spring, W 35	77
Hardhack, Pk 15	124
Harebell, B 21	158
Haw, Black, W 10, B Fr 1	63, 187
Hawkweed, Canada, Y 21	44

INDEX

211

	PAGE
Hawkweed, Panicked, Y 22.....	46
Rough, Y 20.....	43
Hawthorn, W 52, R Fr 8.....	91, 169
<i>Hedeoma pulegioides</i> , Pl 4.....	138
<i>Helenium autumnale</i> , Y 19.....	43
<i>Helianthemum Canadense</i> , Y 5.....	32
<i>Helianthus divaricatus</i> , Y 1.....	29
<i>giganteus</i> , Y 20.....	44
<i>Helonias bullata</i> , Pl 17.....	143
Hemlock, Water, W 37.....	79
Hemp-weed, Climbing, Pk 6.....	116
Henbane, Black, Y 23.....	48
Hepatica, Pl 16.....	143
<i>triloba</i> , Pl 16.....	143
<i>Heracleum lanatum</i> , W 37.....	79
Herb Robert, Pk 5.....	115
<i>Hibiscus Moscheutos</i> , Pk 20.....	128
<i>Hieracium aurantiacum</i> , R 5.....	109
<i>Canadense</i> , Y 21.....	44
<i>paniculatum</i> , Y 22.....	46
<i>scabrum</i> , Y 20.....	43
<i>venosum</i> , Y 16.....	42
Hobble-bush, W 10, R Fr 9.....	63, 170
Hog Peanut, Pl 10.....	141
Holly, Mountain, W 48, R Fr 10.....	88, 170
Honewort, W 37.....	79
Honeysuckle, Bush, Y 4.....	32
Fly, Y 4, R Fr 3.....	31, 166
Involucred, Blk Fr 3.....	187
Ground, Y 10.....	37
Trumpet, R 2, R Fr 6.....	108, 168
Wild, Pk 15.....	123
Horehound, Water, W 1.....	57
Horse-balm, Y 3.....	31
-weed, W 57.....	95
Hound's Tongue, R 5.....	109
<i>Houstonia cocculca</i> , B 4.....	151
Huckleberry, Black, W 55, Blk Fr 6.....	93, 188
Squaw, W 55, G Fr 2.....	94, 197
<i>Hudsonia cricoides</i> , Y 27.....	50

	PAGE
Hudsonia, Heath-like, Y 27.....	50
<i>tomentosa</i> , Y 29.....	53
<i>Hydrocotyle Americana</i> , W 51.....	90
<i>Hydrophyllum Virginicum</i> , W 40.....	81
<i>Hyoscyamus niger</i> , Y 23.....	48
<i>Hypericum Ascyron</i> , Y 3.....	31
<i>Canadense</i> , Y 3.....	31
<i>mutilum</i> , Y 3.....	31
<i>nudicaule</i> , Y 5.....	33
<i>perforatum</i> , Y 3.....	31
<i>Hypoxis erecta</i> , Y 18.....	42
Hyssop, Hedge, Y 6.....	34
<i>Ilex verticillata</i> , W 54, R Fr 3.....	92, 166
<i>Impatiens fulva</i> , Y 31.....	54
<i>pallida</i> , Y 31.....	54
Indian Cucumber-root, Y 7, Blk Fr 5.....	34, 188
Currant, Pk 9, R Fr 9.....	118, 170
Fig, Y 15.....	41
Pipe, W 32.....	75
Tobacco, B 20.....	157
Turnip, Br 3, R Fr 5.....	161, 167
Indigo, Wild, Y 11.....	38
Innocence, B 4, Pl 4.....	151, 138
<i>Inula Helenium</i> , Y 21.....	44
<i>Iris Germanica</i> , Pl 16.....	142
<i>versicolor</i> , Pl 16.....	143
Iron-weed, Pl 21.....	145
<i>Iva frutescens</i> , G 1.....	101
Ivy, Poison, G 7, W Fr 1.....	103, 175
Jack-in-the-pulpit, Br 3, R Fr 5.....	161, 167
Jacob's Ladder, Pl 19.....	144
<i>Jeffersonia diphylla</i> , W 30.....	74
Jerusalem Oak, G 2.....	102
Jewel-weed, Pale, Y 31.....	54
Spotted, Y 31.....	54
Joe Pye Weed, Pk 12.....	121
<i>Kalmia angustifolia</i> , Pk 13.....	121
<i>glauca</i> , Pk 9.....	117
<i>latifolia</i> , W 54.....	92

INDEX

213

	PAGE
Knotweed, Amphibious, Pk 16.....	125
Pink, Pk 16.....	125
Sand, Pk 17.....	126
<i>Krigia amplexicaulis</i> , Y 16.....	41
Labrador Tea, W 56.....	94
<i>Lactuca Canadensis</i> , Y 22.....	46
<i>Scariola</i> , Y 21.....	44
Ladies' Tresses, W 21.....	69
Lady's Slipper, Pink, Pk 24.....	130
Showy, Pk 25.....	131
Yellow, Y 27.....	50
Thumb, Pk 16.....	125
Larkspur, Dwarf, B 14.....	155
Tall, B 14.....	155
<i>Lathyrus maritimus</i> , Pl 10.....	140
<i>palustris</i> , Pl 11.....	141
Laurel, Great, W 53.....	91
Mountain, W 54.....	92
Pale, Pk 9.....	117
Sheep, Pk 13.....	121
Leather-leaf, W 46.....	86
-wood, Y 27.....	50
<i>Lcdum latifolium</i> , W 56.....	94
Leek, Wild, W 31.....	75
<i>Leontodon autumnalis</i> , Y 16.....	41
<i>Leonurus Cardiaca</i> , Pl 4.....	138
<i>Lepidium Virginicum</i>	84
<i>Lespedeza polystachya</i> , Pk 16.....	125
<i>procumbens</i> , Pk 14.....	123
<i>reticulata</i> , Pk 21.....	128
Lettuce, Prickly, Y 21.....	44
Wild, Y 22.....	46
<i>Leucothoe racemosa</i> , W 46.....	86
<i>Liatris scariosa</i> , Pl 21.....	145
<i>Lilium Canadense</i> , Y 7.....	34
<i>Philadelphicum</i> , R 3.....	103
<i>superbum</i> , R 4.....	108
Lily, Blackberry, Y 18.....	43
Meadow, Y 7.....	34
-of-the-valley, Wild, W 45, R Fr 4.....	84, 167

	PAGE
Lily, Turk's-cap, R 4.....	108
Wood, R 3.....	108
<i>Limnanthemum lacunosum</i> , W 20.....	68
<i>Limosella tenuifolia</i> , W 29.....	74
Linaria, Blue, B 20.....	157
<i>Canadensis</i> , B 20.....	157
<i>vulgaris</i> , Y 29.....	53
<i>Lindera Benzoin</i> , Y 30, R Fr 11.....	54, 171
<i>Linnaea borealis</i> , Pk 5.....	115
Lion's-foot, Y 22.....	46
<i>Listera cordata</i> , Pl 1.....	135
Live-forever, Pl 22.....	145
Lizard's Tail, W 42.....	82
<i>Lobelia cardinalis</i> , R 6.....	110
<i>Dortmanna</i> , B 10.....	153
Great, B 20.....	157
<i>inflata</i> , B 20.....	157
Pale Spiked, B 20.....	157
<i>spicata</i> , B 20.....	157
<i>syphilitica</i> , B 20.....	157
Water, B 10.....	153
<i>Lonicera ciliata</i> , Y 4, R Fr 3.....	31, 166
<i>involuta</i> , Blk Fr 3.....	187
<i>sempervirens</i> , R 2, R Fr 6.....	108, 168
Loosestrife, Four-leaved, Y 7.....	34
Fringed, Y 4.....	32
Purple, Pk 4.....	114
Yellow, Y 2.....	30
Lopseed, Pk 7.....	116
<i>Lotus corniculatus</i> , Y 10.....	37
Love Vine, W 32.....	75
<i>Ludwigia alternifolia</i> , Y 26.....	49
<i>palustris</i> , G 8.....	104
Lupine, Wild, B 14.....	155
<i>Lupinus perennis</i> , B 14.....	155
<i>Luzula campestris</i> , Y 23.....	47
<i>Lychnis Flos-cuculi</i> , Pk 5.....	116
<i>Githago</i> , Pl 5.....	139
<i>Lycopus sinuatus</i> , W 1.....	57
<i>Virginicus</i> , W 1.....	58

	PAGE
<i>Lysimachia nummularia</i> , Y 6.....	34
<i>quadrifolia</i> , Y 7.....	34
<i>stricta</i> , Y 2.....	30
<i>Lythrum Salicaria</i> , Pk 4.....	114
<i>Magnolia glauca</i> , W 47.....	87
Laurel, W 47.....	87
<i>Maianthemum Canadense</i> , W 45, R Fr 4.....	84, 167
Mallow, High, Pl 18.....	144
Indian, Y 27.....	51
Rose, Pk 20.....	128
<i>Malva rotundifolia</i> , W 49.....	89
<i>sylvestris</i> , Pl 18.....	144
Mandrake, W 47.....	87
Marjoram, Wild, Pl 3.....	135
Marsh Marigold, Y 27.....	50
Rosemary, Pl 17.....	144
Vetchling, Pl 11.....	141
Maryland Golden Aster, Y 20.....	43
May-apple, W 47, G Fr 1.....	87, 197
Mayweed, W 41.....	82
Meadow Beauty, Pk 3.....	114
Lily, Y 7.....	34
-sweet, W 61.....	98
<i>Medeola Virginiana</i> , Y 7, Pl Fr 5.....	34, 188
<i>Melampyrum Americanum</i> , Y 6.....	33
<i>Melanthium Virginicum</i> , W 61.....	98
Melilot, White, W 34.....	77
<i>Melilotus alba</i> , W 34.....	77
<i>officinalis</i> , Y 11.....	37
<i>Menispermum Canadense</i> , W 51, Blk Fr 2.....	90, 186
<i>Mentha aquatica</i> , Pl 4.....	138
<i>Canadensis</i> , Pl 7.....	140
<i>piperita</i> , Pl 3.....	136
<i>viridis</i> , Pl 3.....	136
<i>Menyanthes trifoliata</i> , W 24.....	70
<i>Mertensia maritima</i> , B 8.....	153
<i>Virginica</i> , B 18.....	157
<i>Microstylis ophioglossoides</i> , W 45.....	85
<i>Mikania scandens</i> , Pk 6.....	116
Milkweed, Pk 2.....	113

	PAGE
Milkweed, Four-leaved, Pk 12.....	121
Green-flowered, G 4.....	102
Purple, Pk 2.....	114
Swamp, Pk 2.....	114
Milkwort, Pk 22.....	128
Marsh, Pk 12.....	121
<i>Mimulus ringens</i> , Pl 5.....	139
Mint, Mountain, W 1.....	57
Water, Pl 4.....	138
Wild, Pl 7.....	140
<i>Mitchella repens</i> , W 2, R Fr 2.....	58, 165
<i>Mitella diphylla</i> , W 4.....	58
Mitrewort, W 4.....	58
Mock Bishop-weed, W 36.....	78
<i>Monarda didyma</i> , R 1.....	107
<i>fistulosa</i> , Pl 2.....	135
<i>Moneses grandiflora</i> , W 28.....	72
Moneywort, Y 6.....	34
Monkey-flower, Pl 5.....	139
Monk's Hood, Pl 19.....	145
<i>Monotropa Hypopitys</i> , W 32.....	75
<i>uniflora</i> , W 32.....	75
Moonseed, W 51, Blk Fr 2.....	90, 186
Morning Glory, Wild, Pk 14.....	123
Motherwort, Pl 4.....	138
Mountain Sandwort, W 5.....	59
Mudwort, W 29.....	74
Mullein, Y 23.....	87
Moth, Y 29.....	53
Mustard, Black, Y 28.....	52
Hedge, Y 28.....	52
Wild, Y 28.....	52
<i>Myosotis laxa</i> , B 7.....	152
<i>Myrica cerifera</i> , W Fr 3.....	176
Nanny-berry, W 10.....	64, 198
<i>Nasturtium officinale</i> , W 34.....	77
<i>palustre</i> , Y 28.....	52
<i>Nelumbo lutea</i> , Y 17.....	42
Yellow, Y 17.....	42

INDEX

217

	PAGE
<i>Nemopanthes fascicularis</i> , W 48, R Fr 10	88, 170
<i>Nepeta Glechoma</i> , B 5	152
Nettle, Hedge, R 1	107
Hemp, Pk 1	113
New Jersey Tea, W 56	94
Nightshade, Pl 11, R Fr 6	141, 167
<i>Oakesia sessilifolia</i> , Y 25	48
Obedient-plant, Pl 3, Pk 7	116, 137
<i>Oenothera biennis</i> , Y 23	47
<i>fructiosa</i> , Y 23	47
<i>humifusa</i> (<i>Alleni</i>), Y 28	52
<i>pumila</i> , Y 26	49
<i>Opuntia Rafinesquii</i> , Y 15	41
<i>vulgaris</i> , Y 15	41
Orange Grass, Y 5	33
Orchis, Great Green, W 22	69
Northern White, W 43	83
Purple Fringed, Pl 24	146
Showy, Pk 16	124
<i>spectabilis</i> , Pk 16	124
White Fringed, W 43	83
<i>Origanum vulgare</i> , Pl 37	135
<i>Ornithogalum umbellatum</i> , W 26	72
<i>Orontium aquaticum</i> , Y 17	42
<i>Osmorrhiza longistylis</i> , W 37	78
Oswego tea, R 1	107
<i>Oxalis Acetosella</i> , W 28	72
<i>stricta</i> , Y 10	36
<i>violacea</i> , Pl 17	143
Painted Cup, R 5	109
<i>Parnassia Caroliniana</i> , W 28	73
Parsnip, Cow, W 37	79
Water, W 37	79
Wild, Y 8	35
Partridge-berry, W 2, R Fr 2	58, 165
pea, Y 13	39
<i>Pastinaca sativa</i> , Y 8	35
Pea, Butterfly, B 9	153

	PAGE
Pea, Partridge, Y 13.....	39
Pearlwort, W 50.....	90
<i>Pedicularis Canadensis</i> , Y 23.....	47
Pennyroyal, Pl 4.....	138
Pennywort, Water, W 51.....	90
<i>Penthorum sedoides</i> , G 2.....	101
<i>Pentstemon digitalis</i> , W 7.....	60
<i>pubescens</i> , Pl 8.....	140
Pepperbush, Sweet, W 46.....	86
Peppergrass, W 45.....	84
Peppermint, Pl 3.....	136
<i>Phlox divaricata</i> , Pl 9.....	140
<i>subulata</i> , Pk 5.....	115
Wild, Pl 9.....	140
<i>Phryma Leptostachya</i> , Pk 7.....	116
<i>Physalis Virginiana</i> , W 49, G Fr 2.....	89, 197
<i>Physostegia Virginiana</i> , Pk 7, Pl 3.....	116, 137
<i>Phytolacca decandra</i> , W 46, Pl Fr 2.....	86, 193
Pickerel-weed, B 13.....	154
Pimpernel, R 1.....	107
Water, W 45.....	84
Pine Sap, W 32.....	75
Pink, Deptford, Pk 5.....	115
Large Marsh, Pk 11.....	120
Moss, Pk 5.....	115
Sea, Pk 11.....	120
Swamp, Pl 17.....	143
Wild, Pk 5.....	115
Pipewort, Seven-angled, W 20.....	68
Pipsissewa, W 18.....	67
Spotted, W 18.....	67
Pitcher-plant, R 6.....	110
<i>Pluchea camphorata</i> , Pk 19.....	127
Plum, Beach, W 56, Pl Fr 2.....	94, 193
<i>Podophyllum peltatum</i> , W 47, G Fr 1.....	87, 197
<i>Pogonia ophioglossoides</i> , Pk 24.....	131
Poison Ivy, G 7, W Fr 1.....	103, 175
Oak, G 7, W Fr 1.....	103
Poke, W 46, Pl Fr 2.....	86, 193
<i>Polemonium coeruleum</i> , Pl 19.....	144

INDEX

219

	PAGE
<i>Polygala cruciata</i> , Pk 12.....	121
Fringed, Pk 24.....	131
<i>paucifolia</i> , Pk 24.....	131
<i>polygama</i> , Pk 17.....	126
<i>sanguinea</i> , Pk 22.....	128
<i>Polygonatum biflorum</i> , Y 25, B Fr 3.....	49, 181
<i>Polygonella articulata</i> , Pk 17.....	126
<i>Polygonum amphibium</i> , Pk 16.....	125
<i>arifolium</i> , W 51.....	91
<i>hydropiperoides</i> , W 42, G 2.....	82
<i>Pennsylvanicum</i> , Pk 16.....	125
<i>Persecaria</i> , Pk 16.....	125
<i>sagittatum</i> , W 51.....	91
<i>scandens</i> , W 44.....	83
<i>Pontederia cordata</i> , B 13.....	154
Poor Man's Weather-glass, R 1.....	107
Poppy, Celandine, Y 26.....	49
Yellow, Y 26.....	49
<i>Portulaca oleracea</i> , Y 27.....	50
<i>Potentilla Anserina</i> , Y 13.....	38
<i>argentea</i> , Y 14.....	40
<i>Canadensis</i> , Y 14.....	39
<i>fructiosa</i> , Y 14.....	40
<i>tridentata</i> , W 39.....	80
<i>Poterium Canadense</i> , W 33.....	76
Poverty-grass, Y 29.....	53
<i>Prenanthes serpentina</i> , Y 22.....	46
Prickly Pear, Y 15.....	41
Primrose, Evening, Y 23.....	47
<i>Prunus maritima</i> , W 56, Pl Fr 2.....	94, 193
<i>serotina</i> , Blk Fr 4.....	188
<i>Virginiana</i> , W 46, R Fr 4.....	86, 167
Purple-flowering Raspberry, Pk 15.....	124
Purslane, Y 27.....	50
Water, G 8.....	104
<i>Pycnanthemum lanceolatum</i> , W 1.....	57
<i>Pyrola elliptica</i> , W 25.....	70
<i>minor</i> , W 25.....	71
One-flowered, W 28.....	72
<i>rotundifolia</i> , W 25.....	71

	PAGE
Pyrola, Round-leaved, W 25	71
<i>secunda</i> , W 25	71
<i>Pyrus arbutifolia</i> , W 56, R Fr 10	94, 171
<i>Pyxidanthera barbulate</i> , W 50	89
Pyxie, W 50	89
Queen Anne's Lace, W 36	78
Radish, Wild, Y 28	52
Ragged Robin, Pl 5	116
Ragweed, G 3	102
Ragwort, Golden, Y 22	45
<i>Ranunculus abortivus</i> , Y 27	50
<i>acris</i> , Y 27	50
<i>bulbosus</i> , Y 10	36
<i>multifidus</i> , Y 9	36
<i>septentrionalis</i> , Y 10	36
<i>trichophyllus</i> , W 20	68
<i>Raphanus Raphanistrum</i> , Y 28	52
Raspberry, Purple-flowering, Pk 15, R Fr 11	124, 171
Rattlebox, Y 27	51
Rattlesnake-plantain, W 21	69
-weed, Y 16	42
<i>Rhexia Virginica</i> , Pk 3	114
<i>Rhododendron maximum</i> , W 53	91
<i>nudiflorum</i> , Pk 15	123
<i>Rhodora</i> , Pk 15	123
<i>viscosum</i> , W 54	92
<i>Rhus Toxicodendron</i> , G 7, W Fr 1	103, 175
<i>typhina</i> , G 1, R Fr 11	101, 171
<i>venenata</i> , G 1, W Fr 3	101, 176
Robin's Plantain, B 15	155
<i>Rosa blanda</i> , Pk 15	124
<i>canina</i> , Pk 15, R Fr 8	124, 169
<i>Carolina</i> , Pk 15	124
<i>lucida</i> , Pk 15	124
<i>rubiginosa</i> , Pk 15, R Fr 8	124, 169
Rose, Dog, Pk 15, R Fr 8	124, 169
Dwarf Wild, Pk 15	124
Rock, Y 5	32

INDEX

221

	PAGE
Rose, Smooth, Pk 15	124
Swamp, Pk 15	124
Wild, Pk 15, R Fr 8	124, 169
<i>Rubus Canadensis</i> , W 41, Blk Fr 1	81, 185
<i>Chamaemorus</i> , W 48, R Fr 1	88, 165
<i>hispidus</i> , W 41, Blk Fr 1	81, 185
<i>odoratus</i> , Pk 15, R Fr 11	124, 171
<i>villosus</i> , Blk Fr 4	188
<i>Rudbeckia hirta</i> , Y 20	43
<i>lanceolata</i> , Y 12	38
Rue, Early Meadow, G 6	103
Tall Meadow, W 40	80
Ruellia, Smooth, B 3	151
<i>strepens</i> , B 3	151
<i>Rumex Acetosella</i> , R 6	110
<i>Britannica</i> , G 5	103
<i>crispus</i> , G 3	102
<i>Sabbatia angularis</i> , Pk 11	121
<i>chloroides</i> , Pk 11	120
Square-stemmed, Pk 11	121
<i>stellaris</i> , Pk 11	120
<i>Sagina procumbens</i> , W 50	90
<i>Sagittaria variabilis</i> , W 20	68
St. Andrew's Cross, Y 6	33
St. John's wort, Y 3	31
Canadian, Y 3	31
Great, Y 3	31
Marsh, Pk 8	117
Small-flowered, Y 3	31
<i>Sambucus Canadensis</i> , W 8, Pl Fr 1	62, 193
<i>racemosa</i> , W 8, R Fr 9	62, 170
<i>Samolus Valerandi</i> , W 45	84
Sandwort, Broad-leaved, W 5	59
Mountain, W 57	59
<i>Sanguinaria Canadensis</i> , W 30	74
Sanicle, W 37	78
<i>Sanicula Marylandica</i> , W 37	78
<i>Saponaria officinalis</i> , Pk 8	117
<i>Sarracenia purpurea</i> , R 6	110

	PAGE
Sarsaparilla, Bristly, W 37.....	79
Wild, W 35, Blk Fr 6.....	78, 188
<i>Saururus cernuus</i> , W 42.....	82
<i>Saxifraga Pennsylvanica</i> , G 5.....	102
<i>Virginensis</i> , W 26.....	71
Saxifrage, Early, W 26.....	71
Swamp, G 5.....	102
<i>Scutellaria galericulata</i> , B 3.....	151
<i>integrifolia</i> , B 2.....	150
<i>lateriflora</i> , B 2.....	150
Sea-lavender, Pl 17.....	144
-lungwort, B 8.....	153
Rocket, Pl 25.....	146
<i>Sedum Telephium</i> , Pl 22.....	145
Seed-box, Y 26:.....	49
Self-heal, Pl 3.....	137
<i>Senecio aureus</i> , Y 22.....	45
Senna, Wild, Y 13.....	39
Shad-bush, W 46, R Fr 4.....	86, 167
Sheep-laurel, Pk 13.....	121
Sorrel, R 6.....	110
Shepherd's-purse, W 45.....	85
Shin-leaf, W 25.....	70
Shooting Star, Pl 17.....	143
<i>Silene Cucubalus</i> , W 7.....	61
<i>noctiflora</i> , W 6.....	60
<i>Pennsylvanica</i> , Pk 5.....	115
<i>stellata</i> , W 17.....	67
<i>Virginica</i> , R 1.....	108
Silver-rod, W 57.....	95
-weed, Y 13.....	38
<i>Sisymbrium angustifolium</i> , B 12.....	154
<i>officinale</i> , Y 28.....	52
<i>Sium cicutae-folium</i> , W 37.....	79
Skull-cap, B 3.....	150, 151
Mad-dog, B 2.....	150
Skunk Cabbage, Br 2.....	161
Smartweed, G 2.....	101
<i>Smilacina racemosa</i> , W 62, R Fr 7.....	98, 168
<i>Smilax glauca</i> , Blk Fr 2.....	186

INDEX

223

	PAGE
<i>Smilax herbacca</i> , G 8, Blk Fr 2	104, 186
<i>rotundifolia</i> , Blk Fr 2	186
Snake-root, Black, W 34	77
Virginia, G 5	103
White, W 7	61
Sneezeweed, Y 19	43
Snowberry, Creeping, W 49, W Fr 1	88, 175
<i>Solanum Dulcamara</i> , Pl 11, R Fr 6	141, 166
<i>Solidago bicolor</i> , W 57	95
<i>Canadensis</i> , Y 20	44
<i>cacsiã</i> , Y 22	46
<i>juncea</i> , Y 22	46
<i>sempervirens</i> , Y 21	45
<i>ulmifolia</i> , Y 22	47
Solomon's-seal, Y 25, B Fr 3	49, 181
False, W 62, R Fr 7	98, 168
Sorrel, Sheep, R 6	110
Wood, W 28	72
Violet, Pl 17	143
Yellow, Y 10	36
<i>Sparganium androcladum</i> , Br 3	162
Spearmint, Pl 3	136
<i>Specularia perfoliata</i> , B 22	158
Speedwell, B 1	150
Marsh	149
Thyme-leaved, B 1	150
Water, B 1	149
Spice-bush, Y 30, R Fr 11	54, 171
Spiderwort, B 17	156
Spikenard, W 40, R Fr 7	81, 168
<i>Spiraea salicifolia</i> , W 61	98
<i>tomentosa</i> , Pk 15	124
<i>Spiranthes gracilis</i> , W 21, W 42	69, 82
Spotted Cowbane, W 37	79
Spring Beauty, Pk 8	116
Spurge, W 61	97
<i>Stachys palustris</i> , R 1	107
Stagger-bush, W 55	94
Star-flower, W 15	65
-grass, Yellow, Y 18	42

	PAGE
Star of Bethelam, W 26.....	72
<i>Statice Caroliniana</i> , Pl 17.....	144
Steeple-bush, Pk 15.....	124
<i>Steironema ciliatum</i> , Y 4.....	32
<i>Stellaria longifolia</i> , W 7.....	60
<i>media</i> , W 5.....	59
<i>Stenanthemum robustum</i> , W 62.....	98
Stout, W 62.....	98
Stick-tight, Y 1.....	29
Stitchwort, Long-leaved, W 7.....	60
Stonecrop, Ditch, G 2.....	101
Strawberry, American Wood, W 28.....	73
Northern Wild, W 28.....	73
<i>Streptopus roseus</i> , Pk 23, R Fr 3.....	129, 166
<i>Strophostyles angulosa</i> , Pl 12.....	141
<i>Stylophorum diphyllum</i> , Y 26.....	49
Succory, B 16.....	156
Sumac, Poison, G 1, W Fr 3.....	101, 176
Staghorn, G 1, R Fr 11.....	101, 171
Sundew, Round-leaved, W 23.....	70
Thread-leaved, Pk 17.....	125
Sundrops, Y 23.....	47
Allen's, Y 28.....	52
Small, Y 26.....	49
Sunflower, Swamp, Y 19.....	43
Wild, Y 1, Y 20.....	29, 44
Sweetbrier, Pk 15, R Fr 8.....	124, 169
<i>Symplocarpus foetidus</i> , Br 2.....	161
<i>Symphoricarpos vulgaris</i> , Pk9, R Fr 9.....	118, 170
<i>Tanacetum vulgare</i> , Y 9.....	36
Tansy, Y 9.....	36
<i>Taraxacum Taraxacum</i> , Y 16.....	41
Tear-thumb, Arrow-leaved, W 51.....	91
Halberd-leaved, W 51.....	91
<i>Tephrosia Virginiana</i> , Y 12, Pl 19.....	38, 144
<i>Thalictrum dioicum</i> , G 6.....	103
<i>polygamum</i> , W 40.....	80
Thimble-weed, W 15.....	66
Thistle, Swamp, Pl 19.....	145

INDEX

225

	PAGE
Thistle, Yellow, Y 21.....	44
Thorn Apple, W 47, G Fr 1.....	87, 197
Thoroughwort, W 7.....	60
<i>Tiarella cordifolia</i> , W 23.....	70
Tick-trefoil, Pk 18.....	126-127
Toadflax, Bastard, W 59.....	96
Blue, B 20.....	157
Tobacco, Indian, B 20.....	157
Toothwort, W 39.....	80
<i>Tradescantia Virginiana</i> , B 17.....	156
Traveller's Joy, W 2.....	58
<i>Trichostema dichotomum</i> , Pl 5.....	138
<i>Trientalis Americana</i> , W 14.....	65
<i>Trifolium agrarium</i> , Y 10.....	37
<i>arvense</i> , Pk 22.....	129
<i>hybridum</i> , Pk 22.....	128
<i>pratense</i> , R 5.....	109
<i>repens</i> , W 41.....	81
<i>Trillium cernuum</i> , W 12.....	65
<i>erectum</i> , R 3, R Fr 1.....	108, 165
<i>erythrocarpum</i> , W 12.....	65
<i>grandiflorum</i> , W 12, Pl Fr 3.....	65, 194
Larger White, W 12, Pl Fr 3.....	65, 194
Nodding, W 12.....	65
Painted, W 12.....	65
<i>sessile</i> , R 3.....	108
<i>Triosteum perfoliatum</i> , B 3, R Fr 3.....	162, 166
Trumpet-weed, Pk 12.....	121
Turtle-head, W 7.....	61
<i>Tussilago Farfara</i> , Y 16.....	41
Twayblade Heart-leaved, Pl 1.....	135
Twin-flower, Pk 5.....	115
leaf, W 30.....	74
Twisted stalk, Pk 23, R Fr 3.....	129, 166
Umbrella-leaf, W 62.....	98
<i>Utricularia vulgaris</i> , Y 9.....	36
<i>Uvularia perfoliata</i> , Y 25.....	48
<i>Vaccinium corymbosum</i> , W 53, B Fr 2.....	92, 180
<i>macrocarpon</i> , Pk 14, R Fr 2.....	123, 165

	PAGE
<i>Vaccinium oxycoccus</i> , Pk 14, R Fr 2	123, 165
<i>stamineum</i> , W 55, G Fr 2	94, 197
<i>uliginosum</i> , W 49, Blk Fr 6	88, 189
<i>vacillans</i> , W 55, B Fr 3	93, 180
Valerian, Swamp, Pk 9	118
<i>Valeriana sylvatica</i> , Pk 9	118
Venus' Looking-glass, B 22	158
<i>Verbascum Blattaria</i> , Y 29	53
<i>Thapsus</i> , Y 23	47
<i>Verbena hastata</i> , Pl 3	135
<i>urticifolia</i> , W 1	57
<i>Vernonia Novaboracensis</i> , Pl 21	145
<i>Veronica Americana</i> , B 1	150
<i>Anagallis-aquatica</i> , B 1	149
<i>officinalis</i> , B 1	150
<i>scutellata</i> , B 1	149
<i>serpyllifolia</i> , B 1	150
<i>Virginica</i> , W 19	67
Vervain, Blue, Pl 3	135
White, W 1	57
Vetch, Pl 10	141
Blue, B 7	152
<i>Viburnum acerifolium</i> , W 8, Blk Fr 3	62, 187
<i>cassinoides</i> , W 10, B Fr 1	64, 179
<i>dentatum</i> , W 10, B Fr 1	64, 179
<i>lantanoides</i> , W 10, R Fr 9	63, 170
<i>Lentago</i> , W 10, Blk Fr 3	64, 187
Maple-leaved, W 8, Blk Fr 3	62, 187
<i>Opulus</i> , W 8	62
<i>prunifolium</i> , W 10, B Fr 1	63, 179
Sweet, W 10, Blk Fr 3	64, 187
<i>Vicia Cracca</i> , B 7	152
<i>sativa</i> , Pl 10	141
<i>Viola blanda</i> , W 27	72
<i>Canadensis</i> , W 48	88
<i>canina</i> , Pl 26	146
<i>lanceolata</i> , W 27	72
<i>palmata</i> , Pl 15	142
<i>pedata</i> , B 11	154
<i>pubescens</i> , Y 24	48

INDEX

227

	PAGE
Violet, Bird-foot, B 11	154
Blue, Pl 15	142
Canada, W 48	88
Dog, Pl 26	146
Dog's-tooth, Y 18	42
Downy Yellow, Y 24	48
Lance-leaved, W 27	72
Sweet White, W 27	72
Viper's Bugloss, B 19	157
Virginia Creeper, Blk Fr 1	185
Virgin's Bower, Purple, Pl 5	138
Wake-robin, R 3, R Fr 1	108, 165
Water Arum, W 20	67
Watercress, Yellow, Y 28	52
Water Hemlock, W 37	79
-horehound, W 1	57
-leaf, W 40	81
Lobelia, B 10	153
Mint, Pl 4	138
Parsnip, W 37	79
-pennywort, W 51	90
Pepper, W 42	82
Plantain, W 26	72
-shield, Pl 14	142
Wax-weed, Pk 4	114
Waxwork, G 8	104
White Snake-root, W 7	61
-weed, W 47	87
Whitlow-grass, W 23	70
Wild Bean, Pl 12	141
Columbine, R 6	110
Ginger, Br 2	161
Willow-herb, Great Hairy, Pk 23	130
Purple-leaved, Pk 11	120
Winterberry, W 54, R Fr 3	92, 166
Wintercress, Erect-fruited, Y 28	52
Wintergreen, W 48, R Fr 3	88, 165
Lesser, W 25	71
Witch Hazel, Y 30	54

	PAGE
Withe-rod, W 10, B Fr 1	64, 179
Woad-waxen, Y 29	53
Wood Betony, Y 23	47
Woodbine, B Fr 4	181
Wood-rush, Y 23	47
sorrel, W 28	72
Violet, B 17	143
Yellow, Y 10	36
Wormwood, Tall, G 6	108
<i>Xyris flexuosa</i> , Y 18	43
Yarrow, W 38	79
Yellow-eyed Grass, Y 18	43
Yellow Rocket, Y 28	41
Star-grass, Y 18	42







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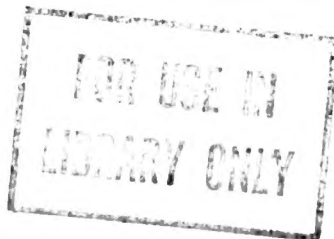
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