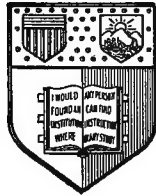


APGAR'S

PLANT ANALYSIS



New York
State College of Agriculture
At Cornell University
Ithaca, N. Y.

Library

*Gift of
Mary E. Brill.*

Cornell University Library
QK 57.A63

Appar's plant analysis; adapted to Gray's



3 1924 000 399 687 mann



The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

<http://www.archive.org/details/cu31924000399687>

A P G A R'S

PLANT ANALYSIS;

ADAPTED TO GRAY'S BOTANIES.

BY E. A. AND A. C. APGAR.

IVISON, BLAKEMAN, TAYLOR & CO.,
NEW YORK AND CHICAGO.

91562

Entered according to Act of Congress, in the year 1874,
BY IVISON, BLAKEMAN, TAYLOR & CO.,
In the Office of the Librarian of Congress, at Washington.

P R E F A C E .

STUDENTS in botany should be taught and required to write out brief descriptions of the plants they examine. This is important for the following reasons :

1st. Pupils will thus become familiar with the meaning of botanical terms ;

2d. They will learn how to apply these terms in botanical descriptions ;

3d. They will distinguish those characteristic features of a plant which are necessary to be known in making the analysis.

4th. The written exercises will afford the teacher an evidence of the work done by the pupils.

The use of the blank schedules, which this book furnishes, will secure a systematic description of the plants analyzed.

The "Analytical Arrangement of Botanical Terms" will be found valuable to the pupil in recalling to mind the terms used in the description of any particular part of a plant.

In order to economize space pupils should abbreviate their descriptions as much as possible.





NOTE -The signs for feet (°), inches ('), and twelfths ("), should be used in giving dimensions, and the signs for staminate (♂) and pistilate (♀) in the description of imperfect flowers.

ANALYTICAL ARRANGEMENT OF BOTANICAL TERMS.

ROOTS.


Kinds. — (1.) PRIMARY, growing from root-end of embryo.

(a.) SIMPLE. — *Conical*, ; *napiiform*, ; *fusiform*, .

(b.) MULTIPLE. — *Moniliform*,  necklace-like. *Fasciculated*,  tufted, thick and fleshy. *Tubercular*,  having small tubers. *Fibrous*,  thread-like.

(2.) SECONDARY, growing from stems.
Underground, starting from stem below ground. *Aerial*, starting from stem above ground.

STEM.

Parts. —  *n*, *Node*, part to which the leaf is fastened.



i, *Internode*, portion between nodes.
a, *Axil*, the angle between leaf and stem, upper side.






Class. — *Exogenous*, outside-growing (Maple, Elm).
Endogenous, inside-growing (Corn-stalk, Timothy).


Situation. — (1.) *Above ground*, usually leaf-bearing.
(2.) *Under ground*, scale-bearing.


Stems above Ground.


Character. — *Herbaceous*, soft, not woody (Four-o'clock).
Suffrutescent, slightly shrubby (Toad-flax).
Suffruticose, shrubby at base (Trailing Arbutus).
Fruticose, shrubby (Currant-bushes).
Arborescent, tree-like (Flowering Dogwood).
Arboreous, tree (Elm).


Direction of Growth. — *Repent*,  prostrate and rooting from the under surface (Partridge-berry).
Procumbent, prostrate, but not rooting (Purslane).
Decumbent,  prostrate, except at the extremity (Poor Man's Weather-glass).


Assurgent,  ascending obliquely.
Erect, upright (Indian Corn).
Scandent,  climbing with tendrils or rootlets (Grape, English Ivy).
Vivuble,  twining (Morning-glory).
Declinate,  declined or bent downwards (Blackberry).
Diffuse,  loosely-spreading (Red Currant).


Forms of Branches. — *Sucker*,  a branch of subterranean origin that finally rises out of the ground. The Raspberry multiplies in this way.

Offset,  a short, prostrate-rooting branch with a tuft of leaves at the end (Houseleek).


Runner,  a long, prostrate-rooting branch with tuft of leaves (Strawberry).


Stolon,  a branch that curves downward and takes root. The Currant multiplies in this way.


Tendril,  a thread-like coiling branch used for climbing.


Spine or Thorn,  a hard, sharp-pointed branch.

Stems under Ground.


Kinds. — *Rhizoma or Rootstock*,  a perennial, horizontal stem, partially or wholly subterranean (Calamus).

Tuber,  an enlarged stem with eyes (White-potato).

Bulb,  a bud, usually subterranean with fleshy scales (Onion, Lily).

Corm,  a solid bulb (Indian Turnip).

LEAVES.

Parts. —  *b*, Blade, the expanded portion.

p, Petiole, the stem.

s, Stipules, leaf-like appendages at base of petiole.

Kinds. — (1.) SIMPLE,  having but one blade.


Sessile,  without petiole.


Petiolate,  with petiole.

Stipulate,  with stipules.

Cirrhous,  with tendril.


(2.) COMPOUND,  having more than one blade.

(a.) *Pinnate*,  with leaflets arranged along a common petiole.


Abruptly pinnate,  with even number of leaflets.

Odd-pinnate,  having an odd leaflet.

Unipinnate,  divided but once.


Bipinnate,  divided twice.

Tripinnate, divided three times.


(b.) *Palmate*,  leaflets diverging from one point.

Unipalmate,  divided but once.

Bipalmate,  divided twice.


Tripalmate,  divided three times.


Framework. — *Midrib*, the central vein.


Ribs,  strong veins branching from near the base of midrib.


Veins, the branching framework.








Veinlets,  small veins.









Venation. — *Parallel*,  with simple veins running parallel from base to apex.








Feather,  with lateral veins branching at regular intervals from midrib.









Radiate,  with strong veins branching from apex of petiole.











Reticulate,  with veins and veinlets that unite and separate in the form of network.

















Form. — (a.) BROADEST AT THE MIDDLE. — *Peltate*, ; *orbicular*, ; *oval*, ; *elliptical*, ; *oblong*, ; *linear*, ; *aceroïse*,  (Pine).

(b.) BROADEST AT BASE. — *Deltoid*, ; *ovate*, ; *lanceolate*, ; *subulate*, ; *cordate*, ; *reniform*, ; *hastate*, ; *sagittate*, .

(c.) BROADEST AT THE APEX. — *Obovate*, ; *oblanccolate*, ; *spatulate*, ; *cuneat*, ; *obcordate*, ; *lyrate*, ; *runcinate*, .

Bases. — *Auriculate*, ; *oblique*, ; *tapering*, ; *abrupt*, ; *claspings*, ; *perfoliate*, ; *connate*, ; *decurent*, .

Apexes. — *Obcordate*, ; *emarginate*, ; *retuse*, ; *truncate*, ; *obtusè*, ; *acute*, ; *acuminate*, ; *mucronate*, ; *cuspidate*, ; *aristate*, .

Margins. — *Entire*, ; *repand*, ; *sinuate*, ; *crenate*, ; *dentat*, ; *serrate*, ; *incised*, ; *laciniat*, ; *palmately-lobed*, ; *palmately-cleft*, ; *palmately-parted*, ; *palmately-divided*, ; *pinnately-lobed*, ; *pinnately-cleft*, ; *pinnately-parted*, ; *innately-divided*, .

Surface. — (a.) WITHOUT HAIRS. — *Glabrous*, smooth.

(b.) SOFT HAIRS. — *Pilous*, few, short; *hirsute*, few, long; *pubescent*, dense, short; *villous*, dense, long; *sericeous*, silky; *lanuginous*, woolly; *toméntous*, matted like felt; *fibrous*, fleecy tufts.

(c.) STIFF HAIRS. — *Scabrous*, minute, hard points; *hispid*, few, short points; *setous*, bristly; *spinous*, having spines.

Color. — *Glaucous*, covered with whitish powder.


Canescent, grayish-white with fine pubescence.


Incánous, hoary-white.



Punctate, having transparent dots.

Hyaline, nearly transparent.


Texture. — *Succulent*, fleshy; *coriaceous*, leather-like; *scari-ous*, dry; *rigous*, wrinkled.


Phyllotaxis, arrangement on the stem. — *Alternate*, ;


opposite, ; *whorled* (verticillate); *radical*, near


the ground; *cauline*, on the stem; *rosulate*,  clus-tered; *fasciculate*,  in bundles.


Vernation, arrangement in the bud.


Induplicate,  folded crosswise (Tulip-tree).


Conduplicate,  folded along midrib (Oak).

Plicate,  folded like a fan (Red-currant).


Circinate,  rolled lengthwise (Fern).


Convolute,  rolled edgewise (Cherry).

Involute,  both edges rolled inward (Apple).

Revolute,  both edges rolled outward (Willow).

Equitant,  astraddle (Iris).

Obovate,  half equitant (Jerusalem Sage).

Triquètrous,  triangular equitant (Sedges).


Duration. — *Fugacious*, falling very early.


Deciduous, falling at the close of the season.


Persistent, remaining through the winter.

INFLORESCENCE.


Parts. — *Flower*,  the blossom.

Peduncle,  the stem of a solitary flower or the main stem of a flower-cluster.

Scape,  a peduncle that grows from the ground.


Pedicel, ; *p.*, the stem of each flower of a flower-cluster.

Bracts, *b.*, small floral leaves.

Involucre,  a cluster of bracts.


Kinds. — (1.) SOLITARY, single, alone.


Terminal, at the summit of the stem.


Axillary,  in the axils of the leaves.


(2.) CLUSTERED, several flowers collected in a bunch.

(a.) INDEFINITE or INDETERMINATE, flowering from axillary buds. Inflorescence centripetal.


Racème,  flowers arranged along the axis; pedicels about equal in length (Currant).



Corymb,  same as raceme, except that the lower pedicels are elongated, making the top flat (Hawthorn).


Umbel,  same as corymb, except that the pedicels branch from about the same point (Milkweed).


Panicle,  compound raceme (Blue-grass).

Thyrus, a compact panicle (Lilac).


Spike,  same as raceme with flowers sessile (Mullein).

Spadix,  a fleshy spike, generally enveloped by a large bract called a *Spathe*,  (Calla Lily).

Áment or *Catkin*,  a slender pendent spike, with scaly bracts (Birch).


Head or *Capitulum*,  a shortened spike, reduced to a globular form (Clover).


(b.) DEFINITE or DETERMINATE, flowers all terminal. Inflorescence centrifugal.

Cyme,  flat-topped or rounded inflorescence (Elder).

Fascicle, a compact cyme (Sweet-William).

Glomerul, a cyme condensed into a head (Mint).

Verticillaster,  two opposite glomerules joined (Motherwort).

Scorpioid,  a one-sided and coiled cyme (Forget-me-not).

FLOWERS PEDICELLATE.

FLOWERS SESSILE. . . .

FLOWER.



Parts. — *Receptacle*, the part upon which the several organs of the flower are inserted.

Calyx, the exterior floral envelope.

Corolla, the interior floral envelope. The calyx and corolla constitute the *protecting organs*, sometimes called *perianth*.

Stamens, the fertilizing organs.

Pistils, the seed-bearing organs. The stamens and pistils constitute the *essential organs*.

Kinds. — *Symmetrical*, same number in each set of organs; *unsymmetrical*, different number.

Complete, all the sets present; *incomplete*, some sets wanting.

Regular, sepals and petals uniform; *irregular*, sepals or petals unlike.

Perfect, stamens and pistils both present; *imperfect*, one set absent.

Staminate, with stamens only; *pistillate*, with pistils only; *neutral*, with neither.

Monœcious, staminate and pistillate on same plant; *diœcious*, on different plants.

Dichlamydeous, having calyx and corolla; *monochlamydeous*, having calyx only; *achlamydeous*, having neither.

Di, *tri*, *tetrá*, *pentá-merous*, two, three, four, or five parts in each set.

Sessile, without peduncle; *pedunculate*, with peduncle.

DEVIATIONS FROM THE NORMAL OR PATTERN FLOWER ARISE FROM

Augmentation, increase of floral circles (Water Lily).

Chorisis, increase of organs by division. The Bleeding-heart shows the *collateral chorisis* of stamens, and the Catchfly shows the *transverse chorisis* of corolla.

Anteposition, parts opposite instead of alternate (Grape).

Cohesion, union of parts of the same set (corolla of Morning-glory).

Adnation, union of different sets. In the Cherry the stamens and corolla are inserted upon the calyx.

Irregularity, parts of the same set unequally developed (Violet, Pea).

Suppression, non-development of some parts. In the mints some of the stamens are suppressed or wanting.

CALYX.

Parts. — *Sepals*, the divisions of the calyx.

Tube, the united portion of a gamosepalous calyx.

Teeth or lobes, the distinct or divided portions of a gamosepalous calyx.

Throat, the orifice or summit of the tube.

Pappus, in Compositæ, the calyx border consisting of scales, teeth, bristles, or slender hairs.

Cohesion. — *Gamosepalous* or *Monosepalous*, sepals partially or wholly grown together.

Truncate, without lobes.

Toothed, lobes small.

Lobed, parted about one fourth.

Cleft, parted about one half.

Parted, separated nearly to the base.

Polysepalous, separated to the base.

Adnation. — *Inferior*, calyx free from ovary.

Half-inferior, calyx adherent to the ovary half-way.

Superior, calyx adherent to the ovary.

Form. — See under COROLLA.

Æstivation. — See under COROLLA.

COROLLA.

Parts. — *Petals*, the divisions of the corolla.

Lamina, the expanded portion of the petal.

Claw, the stem portion of the petal.


Spur, s, the hollow portion of certain corollas.


Crown, a small projection from certain petals (Catchfly).


Cohesion. — *Gamopetalous* or *Monopetalous*, petals partially or wholly grown together.

Truncate, *toothed*, *lobed*, *cleft*, *parted*.

Polypetalous, petals separate.


Adnation. — *Hypogynous*,  corolla attached under the pistil (*gynia*, pistil).


Perigynous,  corolla attached to the calyx. It is thus around the pistil.


Epigynous,  corolla attached to the ovary. It is thus upon the ovary which is a part of the pistil.


Form. — GAMOPETALOUS and POLYPETALOUS.


REGULAR.

Urceolate,  urn-shaped (Whortleberry).

Tubular,  cylindrical (Trumpet Honeysuckle)

Campánulate,  bell-shaped (Harebell).


Infundibular,  funnel-shaped (Morning-glory).

Hypocraterimorphous,  salver-shaped (Phlox).


GAMOPETALOUS.


Rotate,  wheel-shaped (Potato).

IRREGULAR.

Ligulate,  strap-shaped (Dandelion).


Labiata, two-lipped.


Galeate,  upper lip arched (Catmint).

Ringent,  both lips arched (Dead-nettle).

Personate,  throat closed (Toad-flax).


REGULAR.

Rosáceous,  petals without claws (Rose).

Liliáceous,  petals with claws gradually spreading (Lily).

Caryophylláceous, long claws enclosed in a tube (Pink).

POLYPETALOUS.


Cruciferous,  four clawed petals in the form of a cross (Mustard).


IRREGULAR.


Papilionáceous,  butterfly-shaped (Bean).


PARTS. — *Vexillum*, banner; *alæ*, wings; *carina*, keel.


Æstivation, the arrangement of the floral organs in the bud.


Valvular,  pieces met by their margins (Lilac).


Induplicate,  margins turned inward (sepals of Clematis).


Reduplicate,  margins turned outward (sepals of Hollyhock).


Convolute, or *contorted*,  each piece overlaps its neighbor in one direction (Geranium).


Imbricated,  one or more petals wholly outside.

Quincúncial,  five petals, two without and two within and the remaining one with one edge outside and the other inside.

Triquétrous,  three petals, one without and one within, and the remaining one with one edge outside and the other inside.

Vexillary,  having one large petal enclosing the others (Pea).

Plicate,  the folding of gamopetalous flowers.

Supervolute,  with folds turned obliquely in the same direction (Morning-glory).

STAMENS (ANDRŒCIUM).

Parts. — *Anther*, the enlarged and essential portion.


Filament, the stem holding the anther.

Pollen, the fertilizing powder found in the anther.


Kinds. — *Sessile*,  anther without filament.


Sterile, filament without anther.


Connivent,  converging.

Exserted,  protruding out of corolla.

Included, entirely within the corolla.

Didynamous,  four in number, two long and two short.


Tetradynamous,  six in number, four long and two short.


Cohesion. — *Syngenesious*,  united by their anthers.

Monocliphous, united by their filaments into one set.


Diadelphous, united into two sets.

Polyadelphous, united into many sets.

Adnation. — *Hypogynous*,  borne on the receptacle.

Perigynous,  borne on the calyx.

Epipetalous, borne on the corolla.

Alternate,  alternate with the lobes.

Opposite, in front of the lobes.

Epigynous, borne on the ovary at its summit.

Gynandrous, borne on the style (Orchid).


FILAMENT.

Kinds. — *Filiform*, *subulate*, *dilated*, *petaloid*, *bidentate*.

ANTHER.


Parts. — *Lobes (thecæ)* and *connective*.


Adnation. — *Innate*,  anther firm on summit of filament.


Adnate,  anther attached by its whole length to filament.


Extrorse, facing the petals.


Introrse, facing the pistils.

Versatile,  attached near the middle.


Dehiscence. — *Longitudinal*,  opening lengthwise.

Transverse,  opening crosswise.

Porous,  opening by terminal holes.


Valved,  opening by valves or doors.


PISTILS (GYNÆCIUM).


Parts. —  *Stigma*, the rough end to which the pollen adheres.

Style, the stem holding the stigma.

Ovary, the enlarged portion containing the ovules.

Cohesion. — *Simple*,  having but one cell, placenta style and stigma.


Multiple,  a collection of simple pistils (Blackberry).

Compound,  simple pistils grown together, each called a *carpel*.

STIGMA.

Kinds. — *Sessile*, stigma on ovary; no style.

Globose, globular (Four-o'clock).

Capitate,  broad and flat.

Lobed, rounded.


Feathered, like a feather (Grasses).

Linear, thread-like (Corn).

STYLE.


Kinds. — *Basal*, attached to base of ovary (Forget-me-not).

Lateral, attached to side of ovary (Strawberry).

Terminal,  attached to top of ovary.


OVARY.


Parts. — *Placenta*, the parts to which the ovules are attached.


Dissepiments,  partitions.


Cells, cavities in which the ovules are arranged.


Ovules, unfertilized seeds.

Adnation. — *Inferior*,  calyx adherent to ovary, same as superior calyx.

Superior,  calyx free from ovary, same as inferior calyx.

Placentation. — *Free-central*,  ovules attached to a central column in a one-celled ovary (Pink).

Axillary,  ovules attached to a central column in a compound ovary.

Parietal,  ovules attached to the outer walls of the ovary.

OVULE.



Parts. — *Nucleus*, *n*, the essential part in which the embryo is formed.

Primine, *p*, the exterior coat.

Secundine, *s*, the interior coat.


Microphyte, *m*, the opening of the ovary coats.


Funiculus, the stem to which the ovule is attached.


Hilum, *h*, the point of attachment on the ovule.


Chalāza, *c*, the place where the coverings and nucleus join.






Rhāphe, *r*, the connection between the hilum and the chalaza.
 N. B. — Through the funiculus, the rhapshe, and the chalaza the ovule receives its nourishment from the placenta. Through the micropyle it receives the tubular prolongation of the pollen.

Kinds. — *Orthotropous*,  straight; no change in direction of parts (Buckwheat).

Campylotropous,  curved; the micropyle brought near the chalaza (Bean).

Anatropous,  inverted; the micropyle brought near the hilum, pointing to the placenta. Rhapshe the whole length of the ovule (Magnolia).


Amphitropous,  half inverted; short rhapshe (Mallow).


Direction of Ovary. — *Erect*, ; *ascending*, ; *horizontal*, ; *pendulous*, ; *suspended*, .


FRUIT.


Parts. — *Seed*, the part containing the embryo.

Pericarp, the covering of the seeds, including the ovary and all adnate parts. The parts of the pericarp are *epicarp*, or outer coat; *mesocarp*, or middle coat; and *endocarp*, or inner coat.

Dehiscence. — *Septicidal*,  opening of the partitions.

Loculicidal,  opening at the dorsal suture.

Septifragal,  valves falling away from partitions.

Circumcissile,  opening by a circular horizontal line.

Kinds. — *Simple*, *aggregate*, *accessory*, *multiple*.

(1.) **SIMPLE FRUITS.** — *Fleshy*, *Stone*, *Dry* (formed by a single pistil).

(a.) **FLESHY FRUITS.** — Indehiscent (with two or more seeds).

Seeds immersed in

{	<i>Berry</i> , rind membranous (Grape).
	<i>Hesperidium</i> , rind leathery, separable a pulpy mass. (Orange).
	<i>Pēpo</i> , rind hard (Cucumber).

Seeds in cells. — *Pome*, succulent calyx (Apple).


(b.) **STONE FRUITS.** — Indehiscent; one-celled; endocarp hard.

Drupe, three-coated; stone-cell entire (Peach).

Tryma, two-coated; stone-cell two-parted (Walnut).


Eterio, an aggregation of drupes (Raspberry).


(c.) **DRY FRUITS.** — Indehiscent, usually one seed with one coat.

Achēnium,  coat separable from seed (Dandelion).

Utricle, coat inflated (Goosefoot).

Caryopsis, coat inseparable (Wheat).

Glans, invested with a *capule*,  (Acorn).

Samāra,  having winged appendages (Maple).


(c'.) **DRY FRUITS.** — Dehiscent.


Single pistil...

{	<i>Follicle</i> ,  opening by a ventral suture (Columbine).
	<i>Legūme</i> ,  opening by both sutures (Bean).
	<i>Loment</i> ,  jointed legume (Desmodium).

Compound pistil...

{	<i>Capsule</i> , any compound dehiscent fruit.
	<i>Siliqua</i> ,  a two-valved capsule (Mustard).
	<i>Silicle</i> ,  a short siliqua (Shepherd's Purse).

Pyxis,  circumscissile dehiscent (Purslane).


(2.) **AGGREGATE FRUITS**, . A cluster of carpels on one receptacle taken as a whole (Raspberry).

(3.) **ACCESSORY or ANTHOCARPOUS FRUITS.** — Those of which the most conspicuous portion, although appearing like a pericarp in some cases, does not belong to the pistil (Rose-hip).

(4.) **MULTIPLE or COLLECTIVE FRUITS.** — Those which result from the aggregation of several flowers into one mass (Pine-apple, Mulberry).

Strōbila or *Conc*, a scaly multiple fruit, resulting from the ripening of some kinds of catkins (Hop, Conifers).

Gūbalus, a closed cone (Juniper-berry, Red Cedar).

SEED. 

Parts. — *Integuments*, seed-coats. *Nucleus*, part containing the embryo.


(1.) **PARTS OF INTEGUMENTS:**

Testa (*episperm*), the outer or proper seed-coat.


Tegmen (*endopleura*), the inner coat, sometimes wanting.

Funiculus Hilum (*h*), *Chalāza* (*c*), *Rhāphe* (*r*), are the same as in ovule.


Ariol, covering exterior to the integuments (not in the ovule) (May-apple, Water-lily).

Coma,  a tuft of hairs on certain seeds (Silkweed).

This is to be distinguished from pappus, which is a tuft on the fruit (Achenium).


(2.) PARTS OF NUCLEUS: 

Embryo (*e*), the initial plantlet.




Radicle (*r*),  the rudimentary stem or first internode.

Cotylédon (*c*), the seed leaf at the primary node.

Plümule (*p*), the growing points above the cotyledons.

Albumen (*a*),  the food for the plantlet's first growth, stored outside the embryo.


Kinds. — (1.) GENERAL FORM: *Orthotropous*, ; *cam-*

phytotropous, ; *anatropous*, ; *amphitropous*, ; same as in ovule.


(2.) FORM OF COVERING:

Conformed, adhering closely to nucleus.

Cellular, loose (Pyrola).

Winged,  having expanded appendages (Catalpa).

Woolly, covered closely with fibers (Cotton).

Cônose,  with coma at the end (Willow Herb).

(3.) TEXTURE OF ALBUMEN:


Farinaceous, mealy (Wheat).


Oily, mealy but mixed with oil (Poppy).


Muciláginous, like mucilage (Morning-glory).

Ruminated, wrinkled (Papaw).


(4.) NUMBER OF COTYLEDONS:

Monocotylédonous,  (Corn).


Dicotylédonous,  (Bean).


Polycotylédonous,  (Pine).


(5.) POSITION AND ARRANGEMENT OF EMBRYO:

Eccentric,  embryo on one side of albumen (Indian Corn).

Peripheric,  curved around albumen (Four-o'clock).

Accumbent,  applied to the cotyledons when the radicle is bent and lies along their edge (Water-cress).

Incumbent,  applied to the cotyledons when the radicle rests against the back of one of them (Shepherd's Purse).

Conduplicate,  applied to cotyledons that are incumbent and so folded as to embrace the radicle (Mustard).

(6.) THE DIRECTION OF THE EMBRYO AS RESPECTS THE PERICARP.

Ascending, pointing to the apex.

Descending, pointing to the base.

Centripetal, pointing to the axis.

Centrifugal, pointing to the sides.

ORDER OF DESCRIPTION.

(*Specimen Page.*)

Root	Multiple, fibrous.
Stem	Herb, erect, branching, 4', glabrous.
Leaves	Sessile, indistinct, oblong to spatulate, acute, entire, glabrous, opposite, 3" to 5" long.
Flowers	Solitary, terminal, slender peduncle, perfect, 5".
Calyx	Green, cleft, half-inferior cup.
Sepals	4, pointed, valvate.
Corolla	Light-blue with yellow eye, cleft, perigynous, salver.
Petals	4, oval, pointed, valvate.
Stamens	4, sessile, free, epipetalous, alternate.
Anthers	Oblong, 2, longitudinal
Pistil	1, compound, style 1.
Stigma	2, oblong, lateral.
Ovary	2, half-superior, axillary.
Fruit	Loculicidal, pod notched at apex.
Seeds	Several in each cell, saucer-shaped.

Remarks.— In some plants the style is exerted and the stamens included, in others the style is included and the stamens exerted. They grow in tufts.

Class. — Exogenous.

DIVISION. — Monopetalous.

ORDER. — Rubiaceæ.

Name. { SCIENTIFIC. — *Houstonia cærulea*.
 { COMMON. — Common Houstonia or Bluets.

Locality. — Moist meadows, Trenton, N. J.

Date. — May 13th, 1870.

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, æstivation.
Corolla. — Color, form, cohesion, adnation.

Root Multiple, fibrous
Stem Herb. diffuse, toment 2' 4'
Leaves Radicles petiolate, reniform, pinnately 3 lobed, persistent 1-2"
Inflorescence Solitary, perfect, slender scape, 5"-7"
Calyx 2 white, ovate, spatulate-obovate, polysepalous, inferior
Sepals 6-8, entire, very elliptic l., imbricated, inferior
Corolla Absent
Petals Absent
Stamens 10-25, free
Anthers 2-celled, longitudinal
Pistil 12-23, simple
Stigma 1 on each pistil, 2-lobed
Ovary Superior, ovules 1-2 in
Fruit 1-celled, 1-seed
Seeds 1 or 2 in each cell

Remarks. An involucre of 3 ovate bracts surrounds the flower, very much resembling a calyx.

Class E. x. agrostoides
DIVISION Apetalous
ORDER Ranunculaceae
Name. { **SCIENTIFIC** Hepatica triloba
 { **COMMON** Round-lobed Hepatica
Locality Woody hillsides, Wilbraham, Mass. **Date** Apr. 25-83

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple, fibrous.
Stem Herb., erect, 2-4', ^{pubescent}
Leaves Petiolate, Reniform, ^{pubescent} 3-7 lobed, crenate, radicle.
Inflorescence Solitary, perfect
Calyx Green, polysepalous, inferior.
Sepals 2, ovate, imbricated,
Corolla White, rosaceous, polypetalous, hypogynous.
Petals 8-12, oblanceolate, imbricated.
Stamens 35-50, free, hypogynous.
Anthers Oblong, 2 cells, longitudinal.
Pistil 1, simple, 1 short style.
Stigma 1, 2-lobed
Ovary Superior, 1 cell, 2 parietal placentae.
Fruit oblong, fat
Seeds Numerous, orthotropous

Remarks. Sepals fall before the flower is fully opened.

Class Exogoneous.
DIVISION Polypetalous.
ORDER Papaveraceae.
Name. { **SCIENTIFIC** Sanguinaria *canadensis*.
 { **COMMON** Blood Root.
Locality Rich soil around fences and rocks, Millbrook, N.Y. Date Apr. 26, 83

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple Fibrous.
Stem Fruticose, erect, 6°-15°
Leaves Alternate, lanceolate, serrate, stipulate.
Inflorescence Catkins, dioecious.
Calyx Absent.
Sepals Absent.
Corolla Absent.
Petals Absent.
Stamens 2 in bract, free, hypogynous.
Anthers Oblong, 2-celled, longitudinal.
Pistil 1 in each bract, 1 style, simple.
Stigma 1, 2 lobed.
Ovary Superior, 1-celled, 2 parietal.
Fruit Longitudinal, follicle.
Seeds Numerous, comose.

Remarks. Catkins come before the leaves.

Class Exogamous.

DIVISION Aetalous

ORDER Salicaceae

Name. { **SCIENTIFIC** *S. cordata*

{ **COMMON** Pussy Willow

Locality Banks of streams & damp ground. Williston. **Date** Apr. 27. 83

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.**Stamens.** — Number, cohesion, adnation.**Anthers.** — Form, cells, dehiscence.**Pistil.** — Number, parts, cohesion.**Stigma.** — Number, kind.**Ovary.** — Adnation, number of cells, placentation.**Fruit.** — Dehiscence, kind.**Seeds.** — Number, kind.

Root Multiple Fibrous.
 Stem Erect, arborescens.
 Leaves Opposite, petiolate, radiate, 3-5 lobed
 irregularly serrate.
 Inflorescence Umbel, axillary, diascious.
 Calyx Greenish red, campanulate, parted, inferior.
 Sepals 5, oval, valvate.
 Corolla Yellow-red, polypetalous, perispermous.
 Petals 5, oblong, valvate.
 Stamens 5, free, hypogamous, versatile.
 Anthers Oblong 2-celled, longitudinal.
 Pistil 1, co-axiform, 2 styles.
 Stigma 2, feathered long.
 Ovary Superior, 2 celled.
 Fruit Samaras.
 Seeds 2,

Remarks.

Class *Exogoneous*DIVISION *Polypetalous*ORDER *Sapindaceae*Name. { SCIENTIFIC *Acer Rubrum*COMMON *Red or Swamp Maple*Locality *Swampy land Wilkesbarre Pa.* Date *Apr. 28 '93*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.

Stem Lenticose, erect, 4°-6°

Leaves Alternate, stipulate, cordate, doubly serrate.

Inflorescence Axillary, catkins and heads, monoaxillary.

Calyx Absent-

Sepals Absent-

Corolla Absent-

Petals Absent-

Stamens 5-8, free, hypogynous,

Anthers O long, 2 celled, longitudinal, adnate.

Pistil 2-6.

Stigma 2, long sessile

Ovary 1 celled, basal

Fruit Indehiscent, globular nut-

Seeds 1 in each ovary, orthotropus

Remarks. It grows in thickets

Class *Exogenae*

DIVISION *Apetalous*

ORDER *Rupuliferae*

Name. { **SCIENTIFIC** *Corylus Americana*

{ **COMMON** *American Hazelnut*

Locality. Rich soil. Wilbraham Mass. **Date.** Apr. 28 '93

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple Fibres

Stem Arboreal, erect.

Leaves Alternate, petiolate, broadly cordate
slightly serrate.

Inflorescence Terminal catkin, dioecious.

Calyx White, cup-shaped, inferior.

Sepals Monosepalous, entire.

Corolla Absent.

Petals Absent.

Stamens 7-12, perigynous, free.

Anthers Oblong, 2 cells, longitudinal, imbr.

Pistil 1. Style 1, simple.

Stigma 1. Lobed.

Ovary Superior, 1 cell, punctuous.

Fruit

Seeds

Remarks. The bark is covered with white substance resembling white wash, which rubs off easily. Lobes of bracts fringed with long hairs.

Class Exogenous

DIVISION Apetalous

ORDER Golicaceae.

Name. { **SCIENTIFIC** Populus Tremuloides

{ **COMMON** American Aspen

Locality Dry grounds Wilkesbarre **Access Date** Apr. 28 '89

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.
Stem Arboreous, erect.
Leaves Alternate, simple.
Inflorescence Umbel, perfect.
Calyx Red, cup shaped, 7 lobed, inferior.
Sepals Monosepalous.
Corolla Absent.
Petals Absent.
Stamens 7-9, free, hypogynous.
Anthers Oblong, 2 celled, longitudinal, adnate.
Pistil 1, 2 styles, compound.
Stigma 2, slightly feathered.
Ovary Superior, 2 celled.
Fruit Samara.
Seeds 1,

Remarks. Grows to very large size and the branches curve over and hang down.

Class Exogenous

DIVISION Apetalous

ORDER Urticaceae

Name. { SCIENTIFIC *Urtica americana*
 { COMMON American or White Elm

Locality Moist soil, Chatham Mass. **Date** Apr 28^r 88

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multifid fibrous.
Stem Arborescens, erect,
Leaves Alternate,

Inflorescence Umbel, pubescent
Calyx Green-red, campanulate, lobed, inferior.
Sepals Anous sepals 7-9 lobed.
Corolla Absent
Petals Absent
Stamens 7-9, free, hypogamous,
Anthers Oblong, 2 cells, longitudinal, imbricate.
Pistil 1, 2 styles, compound.
Stigma 2, oblong.
Ovary Superior, 2 cells.
Fruit Samaras
Seeds 1,

Remarks. The inner bark is mucilaginous and the upper sides of the leaves are very rough.

Class Oxogonous

DIVISION Heterogonous

ORDER Urticaceae

Name. { SCIENTIFIC *Urtica Turbosa*
 COMMON Slippery Elm

Locality Any soil Wilburton, Va. Date Apr. 29 '93

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root	Multiple fibrous.
Stem	Arboreal, erect, 8-20
Leaves	Alternate, petiolate, cordate pointed serrate
Inflorescence	Catkins, axillary, monoaxillary
Calyx	White, cup shaped 3-5 lobed
Sepals	Monosepalous
Corolla	Absent
Petals	Absent
Stamens	6-10, polygamous
Anthers	Oblong, 2 celled, longitudinal, white
Pistil	2, compound
Stigma	4,
Ovary	
Fruit	
Seeds	

Remarks.

Bark covered with white spots. Catkins grow in clusters.

Class *Eugeneo*

DIVISION *Apetalous*

ORDER *Betulaceae*

Name. { **SCIENTIFIC** *Alnus incana*

{ **COMMON** *Speckled or Hazy Alder*

Locality. *Banks of stream Wilburham Mass* Date *Apr 28, '89*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiflorous fibrous.

Stem Fruticose, erect. 6'-15'

Leaves

Inflorescence sessile lateral clusters, perfect.

Calyx light yellow, viscid, parted, inferior.

Sepals 2 ranks of 4-e, imbricated, spatulate.

Corolla Absent.

Petals Absent.

Stamens 9, free, hypogynous.

Anthers 2-lobed, 2 cells, 2-lobed, innate.

Pistil 1, 1 style, simple.

Stigma 1, 2-lobed.

Ovary Superior, 1 cell, 1 ovule suspended.

Fruit Buddiscent, berry.

Seeds 1, orthotropous.

Remarks. The wood has spicy odor and is very brittle. The bark is covered with white spots.

Class Exogenous

DIVISION Apetalous

ORDER Lauraceae

Name. { **SCIENTIFIC** *Lindera Benzoin*

 { **COMMON** Common Spicewood or Benzoin Bush

Locality Damp woods Wilburton Mass. **Date** May 2 '99

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root *Multiple fibrous*

Stem *Herb, erect, 1-2, glabrous*

Leaves *Opposite, sessile, orbicular, slightly repand.*

Inflorescence *Leafy cyme, corymbose*

Calyx *5, green, not accresc., 5 parted, 2 superior*

Sepals *4, orbicular, untruncated*

Corolla *Absent*

Petals *Absent*

Stamens *8, free, epigynous*

Anthers *Roundish, 2 cells, imbricate*

Pistil *1, 2 short styles, compound*

Stigma *2, lobed*

Ovary *10 superior, 2 cells, parietal*

Fruit

Seeds *Many*

Remarks. *The stem is repeatedly forked.*

Class *Exogynous*

DIVISION *Apetalous*

ORDER *Latifragaceae*

Name. { SCIENTIFIC *Chrysis pubescens Americana*

{ COMMON *Golden Latifrage*

Locality *In or by brook Wilbrahan Mass Date May 2 '89*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation?

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous

Stem Herb., erect, 2-6', pilus.

Leaves Radical, petioled, ovate-spatulate, serrate.

Inflorescence Panicle, cymose, perfect, regular.

Calyx Green, cup shaped, cleft, inferior.

Sepals Anovosepalalous, 5 cleft, pointed.

Corolla White, rosaceous, distinct, hypogynous.

Petals 5, of lanceolate, imbricated.

Stamens 10, free, hypogynous.

Anthers 2 cells, longitudinal, innate.

Pistil 2, 2 styles, simple.

Stigma 2, rounded or lobed.

Ovary Superior.

Fruit

Seeds Many,

Remarks.

.....

.....

Class *C. rogersii*

DIVISION *Poly petalous.*

ORDER *Saxifragaceae.*

Name. { SCIENTIFIC *Saxifraga Virginiana*

 { COMMON *Early Saxifrage.*

Locality *Rocky banks Wilkesham* *Ureas* Date. *May 3 '88.*

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, aestivation.
Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Terrestrial, erect, 2-5', very branching
Leaves alternate, opposite, elliptical, entire
Inflorescence Umbel, perfect.
Calyx Yellow, tubular, nearly truncate, inferior
Sepals Monosepalous
Corolla Absent
Petals Absent
Stamens 8, free, proterogynous
Anthers Obovate, 1 cell, longitudinal
Pistil 1, 1 long style, simple
Stigma 1, lobed
Ovary Superior, 1 cell, ovule erect
Fruit
Seeds 1, orthotropous, suspended

Remarks. It has a very strong fibrous bark hence its name. The umbel is surrounded by the involucre of 4 filous bracts.

Class Exogenous
DIVISION Apetalous
ORDER Thymelaceae
Name. { **SCIENTIFIC** *Diosca Palustris*
 { **COMMON** Leather or Grass Wood
Locality Any soil Willabam Grass Date May, 3, '83

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous.

Stem Suffruticose, erect,

Leaves Alternate, petioled, cordate, entire,
globose.

Inflorescence Head, perfect

Calyx Green, polysepalous, inferior,

Sepals 5, lanceolate, imbricated.

Corolla White-pink, funnel-shaped, monospetalous. hypogynous

Petals 5, lobed.

Stamens 8, free, perigynous.

Anthers Oblong, 2 celled, longitudinal.

Pistil 1, 1 style, compound.

Stigma 1, globose.

Ovary Superior,

Fruit

Seeds Many,

Remarks.

Class *Exogonans*

DIVISION *Monopetalous*

ORDER *Cricaceae*

Name. { SCIENTIFIC *Epigaea repens*

{ COMMON *Trailing Arbutus, Ground Laurel, or Mayflower.*

Locality *Rich wood. soil. Killbuck Mass* Date *May 5 '99*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.
Stem Herbaceous, diffuse, 1² - 1¹/₂°, glabrous.
Leaves Alternate, petiolate, reniform, slightly
 serrate.
Inflorescence Topyceme of ^{few} flowers perfect.
Calyx Yellow, rosaceous, polysepalous, inferior.
Sepals 5, elliptical, umbriated.
Corolla Absent.
Petals Absent.
Stamens Unanyp, free, hypogynous.
Anthers O. long, 2 celled, longitudinal, serrate.
Pistil 3-12, simple.
Stigma 1, sessile, terminal.
Ovary Superior, 1 cell, parietal.
Fruit
Seeds Several in a cell orthotropus.

Remarks. It is used for greens and is usually called cowslip.

Class Exogonous

DIVISION Apetalous

ORDER Ranunculaceae

Name. { **SCIENTIFIC** *altha. Palustris*
 { **COMMON** Marsh Marigold

Locality Wet or swampy places, Wilbraham **Date** May 4 '83

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Truncated.

Stem Herbaceous, erect, 4-15', glabrous.

Leaves In whorls of 2-4, lower by 3 leaflets. Leaflets
petiolate, broadly ovate, base cordate, apex 3-lobed.

Inflorescence Umbel of few flowers, perfect, regular.

Calyx White, woody, inferior, prophyllous.

Sepals 4-9, elliptical, imbricated.

Corolla Absent.

Petals Absent.

Stamens Many, free, hypogynous.

Anthers Oblong, 2-celled, longitudinal, imbricate.

Pistil Many, monostyle, stampl.

Stigma 1, sessile, terminal.

Ovary Superior, 1 cell.

Fruit

Seeds 1 in each cell, orbiculate.

Remarks. In 2 lower are borne on ^{up} slender stalk
also beneath the cluster of flowers

Class Oxogonous

DIVISION Apetalous

ORDER Ranunculaceae

Name. { SCIENTIFIC *Thalictrum Andersonianoides*
COMMON Pine Anemone

Locality Woodlands Wilbraham Cross Date May 9, 1883

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.
Stem Herbaceous, erect - 2-5, fibrous.
Leaves Radical, petiolate, stipulate, palmately 3-
 divided, leaflets oval, serrate.
Inflorescence Loose cymes, regular, perfect.
Calyx Green, rosaceous, polysepalous.
Sepals 5-6, lanceolate, imbricated.
Corolla White, rosaceous, polypetalous, hypogynous.
Petals 5-6, orbicular, imbricated.
Stamens Numerous, free, perigynous.
Anthers Roundish, 1 celled, transverse, imbricate.
Pistil Numerous, 1 style, simple.
Stigma 1, rounded.
Ovary Superior, 1 cell, central.
Fruit Indehiscent, achenes.
Seeds 15 each pistil,

Remarks. They increase by runners as well as seeds.

Class Erogenous

DIVISION Polypetalous

ORDER Rosaceal

Name. { SCIENTIFIC *Fragaria Vesca*
 { COMMON Common Strawberry

Locality. Meadow Willshaven Area **Date.** May 9, '83

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Conical tap root.

Stem Herbaceous, erect, 2-12', pilous.

Leaves Radical, stipulate, pinnate, very jagged edges.

Inflorescence Head perfect, 5"-15"

Calyx White, composed of long hairs, superior.

Sepals Pappus.

Corolla Yellow, ligulate, monopetalous, epipyrrous.

Petals 5 bristles.

Stamens 5, synergous, epipetalous.

Anthers Linear.

Pistil Many, 1 style long slender.

Stigma 2, feathered.

Ovary Inferior, 1 cell, erect axile.

Fruit Indehiscent, achenium.

Seeds 1 in each ovary, spindle shaped.

Remarks. It has a double involucre around the head juice milky.

Class Exogenous

DIVISION Monopetalous

ORDER Compositae

Name. { **SCIENTIFIC** Taraxacum Officinale
 { **COMMON** Common Dandelion

Locality Meadows Wilbraham Mass. **Date** May 8 '88

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Silicious
 Stem Herb, erect, 4-10', pilous, rhizoma.
 Leaves Involute, pinnate, 3 leaflets, leaflets
 oblanceolate, incised.
 Inflorescence Solitary, terminal, long pedicel.
 Calyx White, roseaceous, polyphalous, inferior.
 Sepals 5, oval to elliptical, imbricated.
 Corolla Absent
 Petals Absent
 Stamens Numerous, free, hypogynous.
 Anthers Oblong, 2 cells, longitudinal, imbricate
 Pistil Numerous, 1 style, simple.
 Stigma 1, round,
 Ovary Superior, 1 cell,
 Fruit
 Seeds 1 in ovary; orthotropus

Remarks.

The only leaves on the flower stem form an involucre of 3 leaves of 3 to 5 leaflets beneath the flower.

Class *Exogonous*

DIVISION *Metabolous*

ORDER *Ranunculaceae*

Name. { SCIENTIFIC *Amenonae americana*
 COMMON *Wood Amonon*

Locality *Woodlands Wilbraham Woods* Date *Aug. 12 '83*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple fibrous
 Stem Arboreal, erect
 Leaves Alternate, stipulate, elliptical-lanceolate
 sharply serrate
 Inflorescence Axillary, catkins
 Calyx Absent
 Sepals Absent
 Corolla Absent
 Petals Absent
 Stamens 4 in each scale,
 Anthers Oblong, 1 cell, longitudinal
 Pistil 2-3 in each bract & short styles
 Stigma 2, linear
 Ovary 2 celled
 Fruit Indehiscent, small, achenes
 Seeds 2 in each ovary

Remarks.

.....

.....

Class Exogenous
Division Gymnals
Order Betulaceae
Name. { **SCIENTIFIC** Betula Lutea
 { **COMMON** Yellow or Gray Birch
Locality Moist Woods, Wilbraham Mass. **Date** May 10 '83

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.

Stem Herbaceous, ascending, 1-4', glabrous.

Leaves Radical, (cordate-reniform), petiolate
Slightly crenate.

Inflorescence Solitary terminal, perfect.

Calyx Green, cup shaped, polysepalous, inferior.

Sepals 4, lanceolate, imbricated.

Corolla White, polypetalous, hypogynous.

Petals 5, irregular, imbricated.

Stamens 5, free, hypogynous, slightly exserted.

Anthers Oblong, pointed, 2-lobed, longitudinal.

Pistil 1, 1 style,

Stigma 1, globose

Ovary Superior, 1 celled, 3 parietal.

Fruit Siliquoid, capsule.

Seeds Numerous, anatropous.

Remarks. Has a faint perfume.

Class Exogenous.

DIVISION Polypetalous.

ORDER Violaceae.

Name. { SCIENTIFIC Violaceae Blandia.

 { COMMON Sweet White Violet.

Locality Wet ground Wilbraham Cross Date May 19, '93

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous
Stem Arborescous, erect,
Leaves Opposite, petiolate, 3-5 lobed, base slightly
cordate, pilous.
Inflorescence Umbel, dioecious but sometimes perfect.
Calyx Green, bell shaped, lobed, inferior.
Sepals 5 lobes.
Corolla Absent.
Petals Absent.
Stamens 7-9, free, hypogynous.
Anthers Ob-long, 2 celled, longitudinal.
Pistil 1, 1 style, capitate.
Stigma 2, feathered.
Ovary Superior, 2 celled, 2 parietal.
Fruit , samaras.
Seeds 2,

Remarks.

The flowers are on long slender pedicels and appear at same time as leaves. Sugar is made of the sap.

Class Exogenous

DIVISION Artabarus

ORDER Sapindaceae

Name. { **SCIENTIFIC** *Cres. Saccharinum*.
COMMON Rock or sugar Maple

Locality Any soil Willabam Grass Date: May 11 '88

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, æstivation.**Corolla.** — Color, form, cohesion, adnation.

Root Suberose
Stem 1. 4 to 6 feet, erect
Leaves Alternate, petioled, oblong, sharply serrate
Inflorescence Raceme, pedicel, complete, regular
Calyx Reddish green, slightly campanulate, deeply ^{cleft} ₂ inferior
Sepals 5 cleft, sharply pointed
Corolla Rosaceous, polypetalous fringed
Petals 5, narrow oblong, convolute
Stamens 15, 20, perigynous
Anthers 2 rounded, 2 curved, longitudinal
Pistil 1, 1 style, compound
Stigma 1, 5 lobed
Ovary Half superior, 5 celled
Fruit Drupelet, 5 celled, purple berry
Seeds

Remarks. Berries have sweetish taste and are good to eat; petals about four times as long as sepals. Taste of four wild species very much alike.

Class Eragmoneae

DIVISION Polypetalous

ORDER Rosaceae

Name. { **SCIENTIFIC** Amelanchier canadensis

{ **COMMON** June or Service Berry or Shadbush.

Locality Hillside, U. S. A. Mass. Date May 12, 1893.

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple, fibrous
Stem Suffrutescent, erect, 3-8, rootstock
Leaves 2 nearly opposite on stalk, petiolate, leaflets
 3 rhombic oval, leathery
Inflorescence Raceme, perfect, regular
Calyx Green, viscidous, polysepalous, inferior
Sepals 4, oblong, imbricated
Corolla White, rosaceous, polypetalous, hypogynous
Petals 4, obovate, connate
Stamens 6, free, hypogynous, tetradynamous
Anthers Linear, 1 cell, longitudinal
Pistil 1, 1 style, simple
Stigma 1, round
Ovary Superior, 2 celled parietal
Fruit Opens at both edges from base, siliqua
Seeds Several

Remarks. It has a fleshy toothed rootstock which is sometimes eaten and taste like water cress.

Class E. & G. gymnos
DIVISION Polypetalous
ORDER Lemnicipitae
Name. { **SCIENTIFIC** Dentaria Diphylla
 { **COMMON** Two-leaved Toothwort, Peppier or Crumble Root.
Locality. Great woods Middlebury Vt. Date. Nov. 12. 1883

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Herbaceous, repent, 6-15' long, pilous
Leaves Opposite, sessile, oblong, entire, pilous
Inflorescence Upright, perfect, regular
Calyx Green, rosaceous, polysepalous, inferior
Sepals 5, lanceolate, imbricated
Corolla White, rosaceous, polypetalous hypogynous
Petals 5, emarginate cleft, imbricated
Stamens 10, free, hypogynous
Anthers Reniform, 1 celled, transverse, versatile
Pistil 1, 5 styles, compound
Stigma 5, rounded
Ovary Superior, 1 cell, axillary
Fruit Septicidal, concave, pad.
Seeds Many, obtriangular

Remarks.

Class Exogonous

DIVISION Polypetalous

ORDER Caryophyllaceae

Name. {

SCIENTIFIC *Cerastium viscosum*

COMMON Sticky mouse ear chickweed

Locality Moist soil. Wilburton area

Date May 12 '83

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *Multiple fibrous.*

Stem *Herbaceous, erect, 2-6, branching, ^{short} rootstock*

Leaves *Alternate, petiolete, cordate-uniform serrate,*

Inflorescence *Solitary, axillary slender peduncle*

Calyx *Green, crisp stipoid, polysepalous, inferior*

Sepals *4, lanceol; subobovate*

Corolla *Yellow, irregular, polypetalous, hypogynous*

Petals *5, irregular, imbricated, lower petals spread.*

Stamens *5, slightly anisodilous, hypogynous*

Anthers *Obtuse-pointed, 2 celled, longitudinal*

Pistil *1, 1 style, compound.*

Stigma *1, rounded.*

Ovary *Superior, 1 celled, 3 parietal*

Fruit *Sepitoid, capsule*

Seeds *Numerous, anatropous*

Remarks. *The bases of leaves roll inward towards the center when young. Late rose*

Class *E. rogersii*

DIVISION *Polypetalous*

ORDER *Violaceae*

Name. { **SCIENTIFIC** *Viola pubescens*

 { **COMMON** *Doury Yellow Violet*

Locality *Rich soil. Millwataw Mass. Date May 12 '93*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Fibrous
Stem Herbaceous, erect, 1-2', short tuber like wortstock
Leaves Whorls of 3 leaves, sessile, sheathing
 ovate, taper pointed, entire.
Inflorescence Solitary, terminal, perfect, regular, symmetrical
Calyx Green, coriaceous, 5-lobed, lobes superior,
Sepals 3, lanceolate, imbricated,
Corolla Purple, coriaceous, polypetalous, hypogynous.
Petals 3, ovate, imbricated.
Stamens 6, free, hypogynous.
Anthers Linear, 2 celled, longitudinal, approximate
Pistil 1, no style, confluent
Stigma 3, sessile, awl shaped.
Ovary Superior, 1 celled, 3-lobed
Fruit Indehiscent, purple berry
Seeds Numerous

Remarks. The flower in a new offensive odor.

Class Endogeous**DIVISION** Petaloidous**ORDER** Liliaceae**Name.** { **SCIENTIFIC** *Tritium & rectorum*

COMMON Purple Tritium or Birthroot

Locality Moist-ill roads Bullabram mass. **Date** May 12 '83

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous

Stem Herbaceous, ascending, 2-6', short thick rhizome

Leaves Radical, stipulate, petiolate, broadly cordate, cut up into many linear divisions.

Inflorescence Terminal, solitary, perfect, irregular.

Calyx Green, irregular, polysepalous, superior.

Sepals 5, lanceolate, imbricated.

Corolla Light blue, white center, irregular, polypetalous, hypogynous.

Petals 5, irregular, imbricated, lower is spurred.

Stamens 5, slight, anthers dehiscent, hypogynous.

Anthers Oblong-pointed, 2 celled longitudinal

Pistil 1, 1 style, compound.

Stigma 1, rounded.

Ovary Superior, 1 celled, 3 parted.

Fruit Spherical, capsular.

Seeds Numerous, anatropous.

Remarks. Rather larger than common violet

Class *C. rogersii*

DIVISION *Poly petalous*

ORDER *Violaceae*

Name. { SCIENTIFIC *Viola pedata*

COMMON *Bird Foot Violet*

Locality *Sandy or light soil Willabaw Va* Date *May 14 '88*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.
Stem Suffrutescent, ascending, 2-3, pilous.
Leaves Alternate, stipulate, 5 leaflets, leaflets are obovate, serrate, pilous.
Inflorescence Axillary, solitary, perfect, regular.
Calyx Green, rosaceous, parted, inferior.
Sepals 10, lanceolate, imbricated.
Corolla Yellow, rosaceous, polypetalous, hypogynous.
Petals 5, orbicular, apex emarginate, imbricated.
Stamens Numerous, free, perigynous.
Anthers Heart shaped, 4 celled, transverse.
Pistil Many, 1 style, simple.
Stigma 1, round.
Ovary Superior, 1 celled.
Fruit Independent, achenes.
Seeds 1 to each pistil.

Remarks. It increases by runners as well as seed.

Class Exogens

DIVISION Polypetalous

ORDER Rosaceae

Name. { **SCIENTIFIC** Potentilla canadensis.

{ **COMMON** Common Wild. cinquefoil or Time Dangler

Locality Open dry ground, Willbuckan Mass. **Date** May 11. 89

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root conical tap root
Stem Diffusate, erect branching, 1° 2°
Leaves Alternate, stipulate, 3 leaflets, leaflets
 oblong-obovate, palmately cleft
Inflorescence Terminal, solitary, perfect regular
Calyx Red, cup shaped, polysepalous, inferior
Sepals 5, ovate to lanceolate, imbricated
Corolla Tip yellow, spur red, polypetalous, hypogynous
Petals 5, lipped with long spur, imbricate
Stamens Many, distinct, hypogynous
Anthers Elliptical, 2 celled, longitudinal
Pistil 5, 1 long style, simple
Stigma 1, round
Ovary Superior, 1 cell, parietal
Fruit Trochoidal, follicle
Seeds Many, orthotropus

Remarks. It is commonly Wild Honey-suckle.

Class Exogenous
DIVISION Polypetalous
ORDER Ranunculaceae
Name. { **SCIENTIFIC** Aquilegia canadensis
 { **COMMON** Wild Columbine
Locality Rocky places, Wilkeson Cross Date May 14 '83

27

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, æstivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Herbaceous, erect, 2'-4', glabrous, rootstock
Leaves Radical, stipulate, cordate to reniform, serrate
Inflorescence Terminal, solitary
Calyx Green, cup shaped, polysepalous, inferior
Sepals 5, lanceolate, imbricated
Corolla Dark blue, irregular, polypetalous, hypogynous
Petals 5, irregular, imbricated, lower petal spurred
Stamens 5, slightly unequal, hypogynous
Anthers 0 blue to pointed
Pistil 1, 1 style, compound
Stigma 1, rounded
Ovary Superior, 1 celled, 3 parietal
Fruit Septicidal, capsule
Seeds Numerous, anatropous

Remarks. The color of the corolla varies from light blue to purple. The edges of the base of the leaf roll in towards the midrib.

Class E. Egenensis
DIVISION Polypetalous
ORDER Violaceae
Name. { **SCIENTIFIC** Viola hirsutillata
 { **COMMON** Common Blue Violet
Locality Low grounds Wallialam Co. Date May 15 '88

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fleshy fibrous.
Stem Herbaceous, erect, 6' - 2° glabrous
Leaves Alternate, stipulate, upper ones 3-5-parted
 root leaves rounded, crenate
Inflorescence Terminal, solitary, perfect
Calyx Green, rosaceous, polyphalous, inferior
Sepals 7, oval, imbricated
Corolla Yellow, rosaceous, polypetalous, hypogynous
Petals 5-8, oval, imbricated
Stamens Many, distinct, hypogynous
Anthers Oblong 2 celled, longitudinal, renate
Pistil Many, simple
Stigma 1, sessile
Ovary Superior, 1 celled, 1 ovule attached at base
Fruit Indehiscent, akene
Seeds 1 in each ovary, roundish

Remarks. Juice acid, stem hollow

Class E. x. ang. and

DIVISION Polypetalous

ORDER Ranunculaceae

Name. { **SCIENTIFIC** Ranunculus abortivus
 { **COMMON** Small Livered Crowfoot

Locality Marshy or wet ground Willabam Date: May 16 '83

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, æstivation.
Corolla. — Color, form, cohesion, adnation.

Root Fibrous.
 Stem Terrestrial, diffuse, 2'-4"
 Leaves Alternate, stipulate, widely orbicular,
 2 lobed, crenate.
 Inflorescence 2 or 3 in umbels, perfect, regular.
 Calyx Light green, coriaceous, 5-lobed, superior.
 Sepals 5, apex rounded, imbricated.
 Corolla White, coriaceous, 5-lobed, perigynous.
 Petals 5, orbiculate, imbricated.
 Stamens 5, distinct, perigynous.
 Anthers Oblong, 2 celled, longitudinal.
 Pistil 1, 2 styles, compound.
 Stigma 2, rounded.
 Ovary Superior, 1 cell, 2 parietal.
 Fruit Indehiscent, berry.
 Seeds Many, orbiculate.

Remarks. It is slightly thorny. The berry is purple and sweet and good to eat.

Class Exogenous.
DIVISION Polypetalous.
ORDER Saxifragaceae.
Name. { **SCIENTIFIC** Ribes Hirtelliana.
 { **COMMON** Common World Gooseberry.
Locality Stony places Willbrahan Mass. Date May 1. 6. 93.

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.**Stamens.** — Number, cohesion, adnation.**Anthers.** — Form, cells, dehiscence.**Pistil.** — Number, parts, cohesion.**Stigma.** — Number, kind.**Ovary.** — Adnation, number of cells, placentation.**Fruit.** — Dehiscence, kind.**Seeds.** — Number, kind.

Root Multiple fibrous.
 Stem Arboreous, erect;
 Leaves Alternate, sessile, elliptical-lanceolate,
 slightly serrate.
 Inflorescence Terminal, catkins, dioecious.
 Calyx Absent.
 Sepals Absent.
 Corolla Absent.
 Petals Absent.
 Stamens 2, slightly monadelphous,
 Anthers Oblong, 2 celled, longitudinal.
 Pistil 1 in each bract, 1 style, simple
 Stigma 2, 2 lobed.
 Ovary 1 celled, 2 parietal
 Fruit Longitudinal follicle
 Seeds Numerous, coarse.

Remarks. It is known by the red or olive
 coloured twig and red anthers.

Class *Cruciferae*

DIVISION *Apetalous*

ORDER *Salicaceae*

Name. { SCIENTIFIC *Salix purpurea*
 COMMON *Osier Willow*

Locality *Along ponds & streams Waltham Mass* Date *Aug 16 '83*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth,
height**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, æstivation.**Corolla.** — Color, form, cohesion, adnation.

Root	Tap root, conical
Stem	Suffrutescent, erect, 1°-2°
Leaves	Alternate, sessile, sagittate, base leaves decurrent, repand,
Inflorescence	Racemes, terminal, perfect
Calyx	Green, cup shaped, polysepalous, inferior
Sepals	4, oblong, cartilagenous
Corolla	White, rosaceous, polypetalous, hypogynous
Petals	4, obovate, connate
Stamens	6, distinct, hypogynous, tetradynamous
Anthers	Roundish, 1 cell longitudinal
Pistil	1, 1 style, compound
Stigma	1, round
Ovary	Superior, 2 cells, 2 parietal
Fruit	Longitudinally dehiscent
Seeds	Numerous

Remarks. The pod is triangular and notched.

Class *Cruciferae*DIVISION *Polypetalous*ORDER *Cruciferae*Name. { SCIENTIFIC *Capsella Bursa Pastoris*COMMON *Common Shepherd's Purse*Locality *Cultivated, near Malabar Coast* Date *Aug. 17 '88*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.**Stamens.** — Number, cohesion, adnation.**Anthers.** — Form, cells, dehiscence.**Pistil.** — Number, parts, cohesion.**Stigma.** — Number, kind.**Ovary.** — Adnation, number of cells, placentation.**Fruit.** — Dehiscence, kind.**Seeds.** — Number, kind.

Root Umbelliferous
Stem Herbaceous, erect, 2'-3', irregular rhizome:
Leaves Radical, stipulate, cordate - hastate
 deeply incised.
Inflorescence Terminal, solitary, perfect
Calyx Green, irregular, polysepalous, inferior.
Sepals 5, lanceolate, imbricated.
Corolla Blue, irregular, polypetalous, hypogynous
Petals 5, irregular, imbricated, lower spread.
Stamens 5, slightly monadelphous, hypogynous.
Anthers Oblong, sutured, 2-celled, unilobed.
Pistil 1, 1 style, compound.
Stigma 1, rounded.
Ovary Superior, 1 cell 3 parietal.
Fruit Septicidal, capsule.
Seeds Numerous, anatropous.

Remarks.

Has rather short broad spur and long petals.

Class Exogynous**DIVISION** Polypetalous**ORDER** Violaceae**Name.**

SCIENTIFIC

Viola sagittata

COMMON

Arrow Leaved Violet

Locality.....

Beside of stream, Williston

Date.....

May 14, 1898

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous.

Stem Herbaceous, ascending, 1-3'

Leaves Stipulate, petiolate, roundedly cordate
crenate.

Inflorescence Solitary, terminal, perfect.

Calyx Green, irregular, 5-lobed, lobes unequal.

Sepals 5, lanceolate, imbricated.

Corolla Dark blue, irregular, 5-lobed, lobes unequal.

Petals 5, irregular imbricated, lower, spurred.

Stamens 5, slightly unequal, anthers hypogynous.

Anthers Oblong-fusoid, 2-celled, longitudinal.

Pistil 1, 2-lobed, compound;

Stigma 2, rounded.

Ovary Superior, 1-celled, 3-angled.

Fruit Septicidal, capsule.

Seeds Many, anatropous.

Remarks. It is the smallest in the violet
and the leaves lie close to the earth.

Class Exogonous

DIVISION Polypetalous

ORDER Violaceae

Name. { **SCIENTIFIC** *Viola selkirkii*
 { **COMMON** Selkirk's Violet

Locality Trade name of American ... **Date** May 17 53

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root fleshy fibrous
Stem herbaceous, ascending, 1° fibrous, coriaceous
Leaves Alternate, stipulate, 3 leaflets, leaflets cordate-ovate, deeply cleft
Inflorescence Terminal, solitary, perfect regular
Calyx Yellow, rosaceous, polysepalous, inferior
Sepals 5, lanceolate, orbicular
Corolla Yellow, rosaceous, polypetalous hypogynous
Petals 5, broadly ovate, imbricated
Stamens Numerous, distinct, hypogynous
Anthers Oblong, 2 celled, longitudinal, unilate
Pistil Unilocular, simple
Stigma 1 to each pistil, sessile, lobed
Ovary Superior, 1 cell, basal
Fruit Indehiscent akene
Seeds 1 to each ovary, anatropous

Remarks. When the flowers open the sepals become reflexed

Class Exogynous
DIVISION Polypetalous
ORDER Ranunculaceae
Name. { **SCIENTIFIC** Ranunculus Bulbosus
 { **COMMON** Bulbus Buttercup
Locality Wet ground, W. Abraham Mass Date May 18th 49

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Caudex fibrous*
 Stem *Arborescent, erect,*
 Leaves *Alternate, stipulate, oblong-lanceolate,*
 serrate, glabrous.
 Inflorescence *Axillary, raceme, perfect, regular*
 Calyx *Green, cup shaped, connate below, 1/2 superior*
 Sepals *5 lobed, valvular*
 Corolla *White, rosaceous, polypetalous, perigynous*
 Petals *5, orbicular, imbricated.*
 Stamens *Many, distinct, perigynous.*
 Anthers *Round, 1 celled, transverse, versatile.*
 Pistil *1, 1 style, simple*
 Stigma *1, rounded*
 Ovary *Half inferior, 1 cell, basal*
 Fruit *Indehiscent, drupe*
 Seeds *1,*

Remarks. *Trunk of tree fruit not much larger than leaf.*

Class *Eudicots*
 Division *Polypetalous*
 Order *Rosaceae*
 Name { SCIENTIFIC *Rumex Polystemmonia*
 COMMON *Wild Red Berry*
 Locality *Waste place Walbraban Acad* Date *May 18.83*

41

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root *Fleshy fibrous.*
Stem *Herbaceous, erect, 1-2°, pilous, short-rooted.*
Leaves *Radiate, broad petiole, oblanceolate
obtusely, slightly toothed.*
Inflorescence *Terminal, raceme, perfect.*
Calyx *Green, rotate, parted, half superior.*
Sepals *5 parted, apex pointed, & alveolar.*
Corolla *Pink, rosaceous, polypetalous, perigynous.*
Petals *5, lanceolate, & alveolar.*
Stamens *10, distinct, perigynous.*
Anthers *Rounded, 2 celled, longitudinal.*
Pistil *2, compound.*
Stigma *2, small round.*
Ovary *Half inferior, 1 celled, 2 parietal.*
Fruit *Longitudinal, pod.*
Seeds *Curves.*

Remarks. *The pedicels of the flowers come from the axils of small bracts.*

Class *Caryophyllales*
DIVISION *Polypetalous*
ORDER *Saxifragaceae*
Name. { **SCIENTIFIC** *Saxifraga Pennsylvanica.*
{ **COMMON** *Swamp Saxifrage*
Locality *Wet ground, Wilbrahan mass. Date Aug. 18. 82.*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root	Conical tap root.
Stem	Herbaceous, erect, 6'-3', glabrous.
Leaves	Alternate, petiolate, compound, 3-7 leaflets, many linear divisions.
Inflorescence	Raceme, perfect.
Calyx	Green, polysepalous, inferior.
Sepals	2, lanceolate, valvular.
Corolla	White and yellow, irregular. Ovaries 4, hypogynous.
Petals	4 cleft, irregular, reflexed, spurred.
Stamens	6, didelphous, hypogynous.
Anthers	2 are 2 celled, 4 1 celled, longitudinal.
Pistil	1, style 1, simple.
Stigma	1, round.
Ovary	Superior, 7 celled, 1 parietal.
Fruit	pod.
Seeds	Several.

Remarks. The leaves are glaucous. The spur of the flower is pink and the yellow growing whitish as flower becomes more mature.

Class *Eragrostis*

DIVISION *Monopetalous*

ORDER *Linnaceae*

Name. { **SCIENTIFIC** *Corydalis glauca*

{ **COMMON** *Pale Corydalis*

Locality Top of rocky ledge, Willabaw Creek Date May 18, 1899

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Fibrous, fibrous
 Stem Herbaceous, diffuse, 6', pilous
 Leaves Alternate, elliptic, base leaves bipinnately divided, others deeply cleft
 Inflorescence Solitary, terminal, 1-2" regular
 Calyx 5, broad, succulent, persistent inferior
 Sepals 5, broad, succulent, imbricated
 Corolla Yellow, 5-lobed, 5-lobed, by 5-lobed
 Petals 5, oblong, imbricated
 Stamens 10, numerous, distinct, hypogynous
 Anthers Oblong, 2-celled, longitudinal, imbricate
 Pistil Several, simple
 Stigma 1, sessile
 Ovary Superior, sessile, basal
 Fruit Indehiscent, 2-lobed
 Seeds 1 in each ovary

Remarks. The petals are three or four times as long as the sepals, and are separated from each other by spaces as wide as the lobes themselves.

Class Erythronium
 Division Potamogeton
 Order Ranunculaceae
 Name. { SCIENTIFIC Ranunculus Lasientaris
 COMMON Early Buttercup
 Locality Rocky hills, ... Date May 1909

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Fleshy, fibrous*
 Stem *Herbaceous, erect, 8"-19", common*
 Leaves *Radicale, stipulate, 2 leaves each of 3 leaflets
leaflets oblong pointed, nearly white.*
 Inflorescence *Spike, dioecious.*
 Calyx *Light green or black purple, of 5*
 Sepals *Absent*
 Corolla *Absent*
 Petals *Absent*
 Stamens *3-5, slightly unequal, adnate,*
 Anthers *lobed, 1 celled, transverse*
 Pistil *1, one style, simple*
 Stigma *1, capitate*
 Ovary *1 celled, free central*
 Fruit *Indehiscent, red berry*
 Seeds *5-6,*

Remarks. *The turnip shaped common has an
intensely pungent juice.*

Class *Endogenous*

DIVISION *Sp. radiceous*

ORDER *Araceae*

Name. { **SCIENTIFIC** *Arisaema Triphyllum*

{ **COMMON** *Common Indian Turnip*

Locality. *Rich moist woods. W. Abolton Mass.* **Date** *May 21. 83*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiflori: fibrous
Stem Lenticular, diffus., 2°-5°
Leaves Opposite, very short petiole, stipulate-
 elliptical, entire
Inflorescence Solitary, axillary, perfect
Calyx Green, cup-shaped, lobed, superior
Sepals 5-lobed, separate
Corolla Yellow, tubular, lobed, perigynous
Petals 5-lobed, imbricated
Stamens 5, distinct, epipetalous
Anthers Oblong, 1-celled longitudinal
Pistil 1, 1-lobed, compound
Stigma 1, rounded
Ovary Superior, parietal
Fruit Indehiscent, berry
Seeds Numerous

Remarks. Two flowers grow from one berry and at the base of the berry are two bracts which very much resemble a calyx

Class Exogonous

DIVISION Monocotyledonous

ORDER Caprifoliaceae

Name. { **SCIENTIFIC** Louicera Libiatica

{ **COMMON** Early Fly Honey-suckle

Locality Swampy land. Willard me. Iowa Date May 19. 83

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous

Stem Herbaceous, erect, 4'-10', pubescent

Leaves Alternate, sessile, bluntly oblong entire

Inflorescence Raceme, perfect, regular

Calyx Green, cup shaped, 5 parted, inferior

Sepals 5 parted, apex acuminate, pubescent

Corolla White, tubular, lobed, hypogynous

Petals 5 lobes, convolute

Stamens 5, distinct, epipetalous

Anthers Oval, 2 celled, longitudinal

Pistil 1, 1 style, compound

Stigma 1, rounded

Ovary Superior, 4 celled

Fruit Indehiscent, akenes

Seeds 4,

Remarks. The Boraginaceae family is known by its one pistil and four akenes or nutlets surrounding it.

Class *Cyclopteris*

DIVISION *Monopetalous*

ORDER *Borraginaceae*

Name. { SCIENTIFIC *Cynoglosson*

{ COMMON *Forget-me-not*

Locality *Prof hills Wilburton* Date *May 1982*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root	Multiple fibrous
Stem	Upright, erect; 15-25"
Leaves	Alternate, petiolate, triangular taper pointed, serrate
Inflorescence	Leathery, monocious
Calyx	Absent
Sepals	Absent
Corolla	Absent
Petals	Absent
Stamens	2 or 3 in each bract, distinct
Anthers	Oblong, 2 celled, longitudinal
Pistil	2-3 in each bract, compound
Stigma	2, thread-like
Ovary	2 celled
Fruit	Indehiscent, akene
Seeds	2

Remarks. The fistillate catkins are much the smaller. The bark peels off in thin sheets and is covered with a white chalk like substance.

Class Exogonous
DIVISION Apetalous
ORDER Betulaceae
Name. { SCIENTIFIC *Betula Alba*
COMMON American White Birch
Locality. Poor soil, Wilbraham Mass. Date May 19 '89

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple fibrous.

Stem Herbaceous, erect, 2'-4' glabrous.

Leaves Rhachicle, petiolate, 3 leaflets, leaflets
wedge shaped, crenate.

Inflorescence Solitary, terminal, perfect, regular.

Calyx White, rosaceous, polysepalous, inferior

Sepals 5-7, oblongate, imbricated.

Corolla Yellow, rosaceous, polypetalous, hypogynous.

Petals 5-7, club shaped & tubular at top, valvular.

Stamens Many, distinct, hypogynous.

Anthers Rounded, 2 celled, longitudinal.

Pistil 2-4, 1 curved style, simple.

Stigma 1, round.

Ovary Superior, 1 celled, 7 parietal.

Fruit Longitudinal, pt of

Seeds Several.

Remarks. It received its name from its long slender yellow rootstock, which is very bitter and used as a medicine, The petals are very small.

Class *Exogynous*
DIVISION *Poly petalous*
ORDER *Ranunculaceae*

Name. { **SCIENTIFIC** *Leptis Laifolia*
COMMON *Three Leaved Gold-thread*

Locality *Ways on damp woods Williamsburg* **Locality** *May 19 '89*

499

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous.

Stem Erect, 30°-50°

Leaves Alternate, stipulate, oblong + etc. Lvs. pointed, sharply serrate

Inflorescence Cymes, axillary.

Calyx Absent.

Sepals Absent.

Corolla Absent.

Petals Absent.

Stamens 8-10 in each whorl, distinct

Anthers Oblong, 1 celled, reniform

Pistil 2 in each whorl, 2 to 4 mm long

Stigma 2, linear

Ovary 1 cell

Fruit Scales open as a cone, leaf like

Seeds 1 in each ray

Remarks. The bracts are coriaceous, tipped and the bark is brownish and rough.

Class Euxoanous

DIVISION Heliconia

ORDER Polytrichaceae

Name. { **SCIENTIFIC** *Cystopteris virginica*

{ **COMMON** American; Hop-Hornbeam, Iron Wood or Iron Wood

Locality Rich woods, New Britain Mass. **Date** May 21, 83

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Conical tap root
Stem Herbaceous, erect, 2'-5'
Leaves Alternate, sessile, oblong-lanceolate serrate, base lance, petiole auriculate, much larger.
Inflorescence Corymb, perfect, regular.
Calyx Green, persistent, polysepalous, superior.
Sepals 4, oblong, mucronate.
Corolla White, viscidaceous, polypetalous, hypogynous.
Petals 4, obovate, mucronate.
Stamens 6, distinct, tetradynamous, hypogynous.
Anthers Oblong, 2 celled, longitudinal.
Pistil 1, distyle, compound.
Stigma 1, globular.
Ovary Superior, 2 celled, 2 parietal.
Fruit Longitudinally, siliqua.
Seeds Several, globular.

Remarks. The pungent root is eaten.

Class Exogenous
DIVISION Polypetalous
ORDER Cruciferae
Name. { **SCIENTIFIC** Nasturtium Armaracia
 { **COMMON** Horseradish
Locality Damp ground Wilbraham Mass Date May 21 83

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth,
height

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root	Tuber-like
Stem	Herbaceous, erect, 4'-8'
Leaves	3 in whorl, petiolate, 2 leaflets, leaflets narrow oblong, serrate
Inflorescence	Terminal, umbel, dioecious
Calyx	Light green, rosaceous, polypetalous, superior
Sepals	5, ovate, slightly imbricated
Corolla	White polypetalous rosaceous, perigynous
Petals	5, oblong, concave
Stamens	5, distinct, perigynous
Anthers	Uniform, 1 cell, transverse
Pistil	1, 3 styles, compound
Stigma	3, glandular
Ovary	Superior, 2 or 3 celled
Fruit	
Seeds	2-4

Remarks. It is so often called by the Indians and received its name from its tuber-like roots.

Class Euphorbia

DIVISION Polypetalous

ORDER Araliaceae

Name. { **SCIENTIFIC** *Aralia Trifolia*
COMMON Dwarf Ginseng or Groundnut

Locality Moist woods on banks Willamson Date May 22 '83

ORDER OF DESCRIPTION.

- Petals.** — Number, form, aestivation.
- Stamens.** — Number, cohesion, adnation.
- Anthers.** — Form, cells, dehiscence.
- Pistil.** — Number, parts, cohesion.
- Stigma.** — Number, kind.
- Ovary.** — Adnation, number of cells, placentation.
- Fruit.** — Dehiscence, kind.
- Seeds.** — Number, kind.

Root *Arundinifera pilonous*
 Stem *Diffusent, erect, 1-2', pilous, rhizomatous.*
 Leaves *Alternate, stipulate, pinnately 2-3 parted, wedge shaped divisions, cut or cleft*
 Inflorescence *2 terminal, symmetrical, perfect, regular, complete.*
 Calyx *Green, rosaceous, polypetalous, inferior*
 Sepals *5, oblong, apex aristate, imbricate*
 Corolla *Light purple, rosaceous, polypetalous, hypogynous*
 Petals *5, wedge shaped, corollate*
 Stamens *10, distinct, hypogynous*
 Anthers *Oblong, 2 cells, longitudinal, versatile*
 Pistil *1, 1 style, compound*
 Stigma *5, disc shaped*
 Ovary *Superior, 5 celled, axillary*
 Fruit *Septicidal, 10 or 12 cells*
 Seeds *5*

Remarks. *It has an odor like a geranium. The two flowers are born on long slender peduncles.*

Class *Exogamous*
DIVISION *Polypetalous*
ORDER *Geraniaceae*
Name. { **SCIENTIFIC** *Geranium maculatum*
 { **COMMON** *Wild or Spotted Geranium*
Locality *Rocky road land, Millbrae, Mass.* **Date** *May 22 '83*

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, aestivation.
Corolla. — Color, form, cohesion, adnation.

Root	Multiple fibrous
Stem	Herbaceous, erect, branching, very thorny.
Leaves	Alternate, stipulate, somewhat ovate, sharply toothed.
Inflorescence	Corymbose, perfect, regular
Calyx	Galen, cup-shaped, lobed, superior
Sepals	5-toothed, an anther along each lobe
Corolla	White, rosaceous, polypetalous, perigynous
Petals	5, orbicular, corvolute
Stamens	Many, distinct, perigynous.
Anthers	Oblong, 2 celled, longitudinal, versatile
Pistil	2, 2-5 styles, compound
Stigma	2-5, capitate
Ovary	Inferior, 2-5 celled, axillary
Fruit	Indehiscent, pome
Seeds	1-2 in cell,
Remarks.	The wood is very tough and scraggy and covered with thorns.

Class Exogamous
DIVISION Polypetalous
ORDER Rosaceae
Name. { **SCIENTIFIC** *Crataegus loccinea*
COMMON Scarlet Limited Thorn
Locality Rocky banks or thickets, Willabar Date May 22 '89

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple fibrous
Stem Herbaceous, erect, branching.
Leaves Alternate, petioled, pinnately com-
 posed, leaflets oblong-lanceolate, serrate.
Inflorescence Single flowers on catkins, pedicel 2 or 3 in cluster.
Calyx Green, cup-shaped, parted, superior.
Sepals 4 toothed,
Corolla Green, viscidous, polypetalous, perispermous.
Petals 4, lanceolate.
Stamens 12-14, distinct,
Anthers Oblong, 2 celled, longitudinal.
Pistil 1, no style, simple.
Stigma 2, club shaped, feathered.
Ovary Inferior, 1 celled, basal.
Fruit Indehiscent, nut.
Seeds 1, 4 lobed.

Remarks.

The nut has a very rough furrowed surface and is covered with a sort of bark.

Class Exogonous

DIVISION Apetalous

ORDER Juglandaceae

Name.

{ SCIENTIFIC
 { COMMON

Juglans leucera

Bitternut or White Walnut.

Locality.

Around rocks on hillsides near Date, Va., 22 '83

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, æstivation.**Corolla.** — Color, form, cohesion, adnation.

Root *Rhizoidal tap-root*
Stem *Herbaceous, erect*
Leaves *Alternate, sessile, uncinulate, lower*
have stipules
Inflorescence *Axillary, racemes, panic*
Calyx *Green, rosaceous, 5 lobes, subulate, reflexed*
Sepals *4, lanceolate, uncinulate*
Corolla *Yellow, rosaceous, polypetalous, long-persistent*
Petals *4, obovate, imbricated*
Stamens *6, distinct, imbricated, tetradynamous*
Anthers *Oblong, curved, 1 celled, transverse versatile*
Pistil *1, 1 style, compound*
Stigma *1, round terminal*
Ovary *Superior, 2 celled, axile*
Fruit *Longitudinal, siliqua*
Seeds *Several*

Remarks.

It has small flowers and the pod is rather six sided and oval shaped.

Class*Exogenous***DIVISION***Poly-petalous***ORDER***Leguminiferae***Name.**

SCIENTIFIC

Sisymbrium officinale

COMMON

*Hedge mustard***Locality.***Waste place, Civilization Camp***Date.***May 22 '83*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root multiple, 1 root

Stem Arborescent, erect

Leaves Serrulate, linear, acuminate, needle-like
shaggy.

Inflorescence leafy catkin, lateral

Calyx Absent.

Sepals 4-5

Corolla Absent.

Petals Absent.

Stamens Many, distinct.

Anthers 4-5, long.

Pistil 2 in each cone, axillary

Stigma 1

Ovary 1 celled, axillary

Fruit Scales separate, cone or strobile

Seeds 2 in each scale, winged

Remarks. The tree is deciduous and the cones have comparatively few scales.

Class *Exogonous*

DIVISION *Gymnosperms*

ORDER *Coniferae*

Name. { SCIENTIFIC *Taxus Americana*

 { COMMON *American Torch* *Tamara* or *Hickmatack*

Locality *Woods, Millbrook Mass.* Date *July 22, '83*

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, æstivation.
Corolla. — Color, form, cohesion, adnation.

Root *Medicinal*
 Stem *T. erect, herbaceous, villous, s. = 1.0, quadrangular, terribly striated.*
 Leaves *Opposite, lanceolate, serrated, venation pinnate, c. = 2.5, s. = 1.5, base cuneate, apex acuminate, petiole 1/4 in.*
 Inflorescence *Terminal, cyme*
 Calyx *Five-lobed, lobes ovate, pointed, sepals 1/2 in.*
 Sepals *5, ovate, acuminate*
 Corolla *White, 5-lobed, lobes ovate, pointed, petals 1/2 in.*
 Petals *5, oval, imbricate*
 Stamens *5, distinct, anthers 1/2 in.*
 Anthers *2, 2-lobed, imbricate*
 Pistil *1, 3-lobed, coarctate*
 Stigma *3, capitate*
 Ovary *Superior, 3-lobed, sessile*
 Fruit *Indurated, woody*
 Seeds *1-4, circular*

Remarks. *The stipules fall readily as soon as the leaves are out.*

Class *Angiosperms*
 DIVISION *Polypetalous*
 ORDER *Malvaceae*
 Name. { SCIENTIFIC *Staphylea trifolia*
 COMMON *American Mad-dogwood*
 Locality *Low ground, hills above Mad-dogwood, O. C. 82*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *Arbutus vitifolia*

Stem *Herbaceous, erect, 1°-2°, trigonous,*

Leaves *1 on stalk, petiole short, trifoliate*
leaflets ovate, sharply cleft.

Inflorescence *Short axillary racemes, perfect,*

Calyx *White, rosaceous, polysepalous, superior.*

Sepals *5, oblong-ovate, imbricate.*

Corolla *White, rosaceous, polypetalous, hypogynous.*

Petals *5, oblong-ovate, imbricate.*

Stamens *Numerous, distinct, hypogynous, white.*

Anthers *Round, 2 celled, longitudinal.*

Pistil *1, axillary, simple.*

Stigma *1, 2 lobed, sessile.*

Ovary *Superior, 1 celled, 1 parietal.*

Fruit *Indehiscent, red berry.*

Seeds *Several,*

Remarks. Each stalk bears one raceme and one leaf. It is difficult to distinguish the corolla from the calyx.

Class *Exogynous*

DIVISION *Polypetalous*

ORDER *Ranunculaceae*

Name. { SCIENTIFIC *Actaea spicata var Rubra*

 { COMMON *Red Baneberry*

Locality *Rich woods, Wilkesbarre, Jan 22, 1883*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, æstivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Herbaceous, diffuse, 2-6', glabrous
Leaves Opposite, sessile, lower leaves oval, toothed
 upper oblong-linear, entire.
Inflorescence Solitary, axillary, sessile, perfect
Calyx Green, rosaceous, 5-ly sep-alous,
Sepals 4, lanceolate, subulose
Corolla Light blue-white, rotate, 2-lobed, hypogynous.
Petals 4 lobes, unguiculate
Stamens 2, distinct, epipetalous.
Anthers Cordate, 2-celled, longitudinal
Pistil 1, no style, compound
Stigma 1, 2-lobed
Ovary Superior, 2-celled, axillary
Fruit Transverse, silicle
Seeds Several,

Remarks. Small weed with very unobtrusive

light blue flower.

Class E. N. angustans

DIVISION Monopetalous

ORDER Scrophulariaceae

Name. { **SCIENTIFIC** *Veronica Peregrina*

{ **COMMON** Creckweed or Russelane Spudwell

Locality Damp marshy ground Wallraban Cross Date Aug. 23. 88

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous

Stem Lenticular, erect, branching, 6'-18'

Leaves Alternate, sessile, linear-lanceolate entire.

Inflorescence Umbel, perfect, regular

Calyx White, rotate, 5-parted, inferior

Sepals 5-parted, valvate.

Corolla Pink, 5-lobed, slightly lobed, hypogynous.

Petals 5 small lobes.

Stamens 10, distinct, hypogynous

Anthers Oval, 2-celled, porous

Pistil 1, 1 style, 6-ovular

Stigma 1, globular

Ovary Superior, 5-celled, axillary

Fruit Lonicular, 5-d

Seeds Several.

Remarks. The leaves are evergreen and white or chalky on the under side.

Class E. x. agnous

DIVISION Monopetalous

ORDER Ericaceae

Name. { **SCIENTIFIC** Andromeda Polifolia

 { **COMMON**

Locality Wet cold bog Wilbraham Mass. Date May 23 88

67

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, æstivation.
Corolla. — Color, form, cohesion, adnation.

Root *Tuberous*
 Stem *Herbaceous, erect, 6'-2', pubescent*
 Leaves *Alternate, petiolate, lanceolate, finately parted*
 Inflorescence *Short spike, terminal, perfect*
 Calyx *Green-purple, inf. 5-lobed, ananosepalous, inferior*
 Sepals *1 split open in front*
 Corolla *White-purple, subgular, ananosepalous, hypogynous*
 Petals *1, 2-lobed*
 Stamens *4, distinct, epipetalous, ditely ananous*
 Anthers *Oblong, 2-celled, longitudinal*
 Pistil *1, 1 style long, compound*
 Stigma *1, needle-shaped*
 Ovary *Superior, 2-celled, parietal*
 Fruit *Terrigenous, dagger shaped pod*
 Seeds *Several*

Remarks. *The color of the corolla varies a great deal.*

Class. *Eugenia*
DIVISION. *Monopetalous*
ORDER. *Scrophulariaceae*
Name. { **SCIENTIFIC** *Medicago leucadenensis*
 { **COMMON** *Common Medicago or Wood Betony*
Locality. *Wet ground Willrolan Pass* **Date.** *May 23 '93*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Multiple fibrous*
 Stem *Arborescens, erect,*
 Leaves *Alternate, stipulate, oblong-ovate, base*
 slightly cordate, doubly serrate.
 Inflorescence *Catkins, monocious*
 Calyx *Absent.*
 Sepals *Absent.*
 Corolla *Absent.*
 Petals *Absent.*
 Stamens *4 on each scale distinct,*
 Anthers *Oblong, celled, longitudinal*
 Pistil *2-3 in each bract, no style, compressed*
 Stigma *2, wathered*
 Ovary *2 celled,*
 Fruit *Indehiscent, akene*
 Seeds *2,*

Remarks. *Bark aromatic and does not*
peel off in layers. Grain of wood very fine.
Staminate catkins much the longer.

Class *Exogenous*
DIVISION *Metalous*
ORDER *Betulaceae*
Name. { **SCIENTIFIC** *Betula Lenta*
 { **COMMON** *Sweet Birch or Birch*
Locality. *Moist woods, Wilbur in Mass. Date May 23 '83*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple fibrous.
Stem Arboreal, erect.
Leaves Alternate, petiolate, oblong-ovate, taper pointed, toothed.
Inflorescence Sterile in heads, fertile 2 terminal, unisexual.
Calyx White-bronze, connate, cleft.
Sepals 5-7 lobes.
Corolla Absent.
Petals Absent.
Stamens 8-16, distinct, hypogynous.
Anthers Oblong, 2 celled, longitudinal.
Pistil 1, 3 styles, compound.
Stigma 3, feathered.
Ovary 2 celled, basal.
Fruit Indehiscent, 3 sided nut.
Seeds 2 in a bur, winged.

Remarks. Saw on the gray's bark and very fine grained wood.

Class Eucaryotes

DIVISION Metazoa

ORDER Lepidiferae

Name. { **SCIENTIFIC** *Fagus ferruginea*
COMMON American Beech

Locality Forests, Withabam Cross **Date** May 23rd 83

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous

Stem Herbaceous, erect, 6'-1.8', glabrous

Leaves Alternate, pinnate, 8-11 leaflets, leaflets
 roundish-oblong, nearly entire

Inflorescence Raceme, panicled

Calyx Green, cup-shaped, polysepalous, superior

Sepals 4, oblong, valvate

Corolla White, rosaceous, polypetalous, hypogynous

Petals 4, obovate, imbricated

Stamens 6, distinct, hypogynous, tetradynamous

Anthers Deltoid, 2-celled, longitudinal

Pistil 1, 1-lobed ovary, semi-basal

Stigma 1, capitate

Ovary Superior, 2-celled, 2 parietal

Fruit Longitudinal, siliqua

Seeds Several, compressed

Remarks. It has a taste something like horseradish
 and is sometimes eaten when young

Class *Exogonous*

DIVISION *Polypetalous*

ORDER *Cruciferae*

Name. { SCIENTIFIC *Nasturtium Officinale*

{ COMMON *Water cress*

Locality *Small brooks Wilbraham Mass* Date *May 24 '93*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root *woody, stout*

Stem *erect, branched, 1-2°*

Leaves *Alternate*

Inflorescence *Umbel, perfect*

Calyx *Green, saucer shaped, lobed, superior*

Sepals *5 lobes*

Corolla *Rose-pink, irregular, polyschalous, hypogynous*

Petals *3, irregular, imbricated*

Stamens *10, distinct, hypogynous*

Anthers *Rounded, 2-celled, fersous*

Pistil *1, style, compound*

Stigma *1, 5-lobed*

Ovary *Superior, 5-celled, axillary*

Fruit *Septicidal, 5-celled pod*

Seeds *Many*

Remarks. *Flowers open slightly, before the leaves and the corolla falls as soon as open*

Class *E. + agerous*

DIVISION *Poly petalous*

ORDER *Ericaceae*

Name. { SCIENTIFIC *Rhodora canadensis*

{ COMMON

Locality *L. Swamp Wilbrahan Mass* Date *May 29 '88*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple fibrous
Stem Herbaceous, erect, 1°-2° glabrous, glaucous.
Leaves Alternate, stipulate, trifoliate
 uniform-cardate, lobed.
Inflorescence Panicles, drooping,
Calyx Green, coriaceous, polysepalous inferior.
Sepals 4, oblong, imbricated.
Corolla Absent.
Petals Absent.
Stamens Orange, distinct, hypogynous.
Anthers Linear, 1 celled, longitudinal
Pistil 4-15; 1 style, simple
Stigma 1, feathered
Ovary Superior, 1 celled, parietal
Fruit Indehiscent; obovate
Seeds 1 in each ovary, angular seeds.

Remarks. The long yellow linear anthers hang below the calyx.

Class Eraginous
DIVISION Apetalous
ORDER Ranunculaceae
Name. { **SCIENTIFIC** Thalictrum Dioisium
 { **COMMON** Early Meadow Rue
Locality Rocky Woods, Willbroun, Mass. Date May 24.83

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root	Multiple fibrous
Stem	Herbaceous, erect - 3'-6'; rhizome
Leaves	Alternate, sessile, cordate - sagittate - entire, parallel veined
Inflorescence	Short-peduncle, perfect, regular
Calyx	White, rosaceous, 5-lobed, inferior
Sepals	4, oblong, imbricated
Corolla	Absent
Petals	Absent
Stamens	4, distinct, hypogynous
Anthers	Oblong, 2 celled, longitudinal
Pistil	1, 1 style, compound
Stigma	1, 2 lobed
Ovary	Superior, 2-3 celled
Fruit	Indehiscent, red berry
Seeds	1 or 2,

Remarks.

Class *Endogamous*

DIVISION *Petaloidaeus*

ORDER *Filiaceae*

Name. { SCIENTIFIC *Smilacina Bifolia*
COMMON *False Solomon Seal*

Locality *Moist woods, Milwaukie, Mass.* **Date** *Aug. 1883*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *is lvs. fibrous*

Stem *Herbaceous, erect, 1-2, fibrous*

Leaves *Alternately petiolate, 3-4 leaflets, ovate, cordate, stiped, lobed*

Inflorescence *axillary compound, pedicel, regular*

Calyx *light yellow, vasaceous, papery, lobes, 5*

Sepals *5, lanceolate, imbricate*

Corolla *yellow, vasaceous, 5-lobed, lobes, hypogynous*

Petals *5, obtuse, imbricate*

Stamens *6, distinct, hypogynous*

Anthers *lobed, 2-lobed, longitudinal*

Pistil *numerous, 1-celled, style, simple*

Stigma *1, simple, acute*

Ovary *1, simple, acute*

Fruit *indehiscent, above*

Seeds *1 in each ovary*

Remarks. *As soon as the flower opens the white band runs against the pedicel*

Class *Exogynous*

DIVISION *Polypetalous*

ORDER *Ranunculaceae*

Name. { SCIENTIFIC *Ranunculus acris*

COMMON *Black Throat Ranunculus*

Locality *Walden, Mass. 12th Nov. 1882* Date *May 24 82*

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, aestivation.
Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Herbaceous, not-branching, 3'-14"
Leaves Alternate, much sessile, oval-oblong
 serrate, serrate on the upper margin.
Inflorescence Lateral cymes, paniculate
Calyx Green, 5-lobed, lobes inferior.
Sepals 5-lobed
Corolla 4-lobed white, unequal, lobes perigynous.
Petals 2-lobed
Stamens 11, distinct, perigynous
Anthers Lanceolate, 2-lobed, 2-locular
Pistil 1, 1-lobed, compound
Stigma 1, lobed
Ovary Superior, 5-lobed axillary
Fruit Indehiscent, black
Seeds 2-lobed?

Remarks. It is the largest of the species
 and has the most numerous flowers. Flowers appear
 slightly below the leaves.

Class *Caryophyllales*
DIVISION *Caryophyllales*
ORDER *Caryophyllales*
Name. { **SCIENTIFIC** *Thalictrum flavum*
 { **COMMON** *Black*
Locality *...* **Date** *...*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Tree

Stem Herpiconous erect, 6' 12' tall, bark smooth

Leaves Alternate, sessile, ovate-lanceolate, entire, glabrous, venation pinnate

Inflorescence Solitary, terminal, panicled cyme

Calyx 3, lanceolate, persistent

Sepals 3, lanceolate, persistent

Corolla 5, tubular, 5-lobed, lobes spreading, 5-angled, 5-merous

Petals 3, imbricate, imbricate

Stamens 6, distinct, hypogynous

Anthers Linear, 2-celled, longitudinal

Pistil 1, 1-lobed, compound

Stigma 3, rounded

Ovary superior, 3-celled, axillary

Fruit Torusoid, 3-lobed angular, etc.

Seeds Several

Remarks. Bark of the stem is cracked
 like *Quercus* bark and the stem is
 very hard

Class *Eudicots*

DIVISION *Pithecaceae*

ORDER *Faboaceae*

Name. { **SCIENTIFIC** *Lupinus sessiliflorus*

 { **COMMON** *A. Bean*

Locality *Richmond, Va. in a garden* Date *Dec. 25, 1893*

71

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple, tuberous

Stem Herbaceous, ascending, 1-2', 1-2' tall

Leaves Alternate, sessile, ovate-oblong, jointed, entire

Inflorescence Axillary, 1-2' peduncle, cymose, regular

Calyx Greenish, tubular, 5-lobed, inferior

Sepals 6, 2-3' long, 2-3' wide

Corolla Absent

Petals Absent

Stamens 4, distinct, 1-2' long

Anthers 4, 1-2' long, longitudinal, 2-3' wide

Pistil 1, 1-2' long

Stigma 1, 1-2' long

Ovary 1, 1-2' long, 3-lobed

Fruit 1, 1-2' long, 3-lobed

Seeds 1, 1-2' long

Remarks. Height of specimen to flowers and fruit is 1-2' tall. The root is a tuberous root. The leaves are jointed. The fruit is a 3-lobed fruit.

Class Endogones

DIVISION Petaloideous

ORDER Liliaceae

Name. { **SCIENTIFIC** *Phlox pilularis*

{ **COMMON** Blue or Red

Locality Wooded bank, Phillipsburg, Mo. Date: May 25-83

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Tuberos

Stem Heracoid, climbing, ³

Leaves Alternate, sessile, ovate-lance-oval pointed at each end, ciliate.

Inflorescence Compound terminal raceme, perfect

Calyx Green, persistent, 5-lobed imbricate

Sepals 6 linear

Corolla Absent

Petals Absent

Stamens 6, distinct, 2 long and 4 short

Anthers Oblong, 2-celled, 4-lobed

Pistil 1, 2-lobed, compound

Stigma 1, 2-lobed

Ovary Superior, 2-celled, axillary

Fruit Dehiscence, 2-lobed

Seeds 2

Remarks.

.....

.....

Class *Endogamous*

DIVISION *Phaloidae*

ORDER *Liliaceae*

Name. { SCIENTIFIC *Chilodactylus Macleanii*

COMMON *Liliaceae Macleanii*

Locality *Moist woods, near river, near* Date *May 25-88*

73

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple, fibrous
Stem Herbaceous, erect 4-15" upright leafless
Leaves Alternate, petiolate, elliptic, base slightly cordate, serrate
Inflorescence Racemes, perfect, regular
Calyx 5 lobes, imbricate, and persistent
Sepals 2, small, imbricate
Corolla 5 lobes, imbricate, spreading
Petals 5, orbicular, imbricate
Stamens Many, distinct
Anthers Oblong, 2 cells, longitudinal dehiscence
Pistil 1, terminal, long style
Stigma 2, red, sessile
Ovary 2, linear, fused at base
Fruit 2, linear, dark red, dried
Seeds 1, nearly round

Remarks. Same as the last, but with a few flowers
 not quite so large as the last

Class *Cruciferae*
Division *Ranunculales*
Order *Ranunculales*
Name. { **SCIENTIFIC** *Samolus Virginicus*
 { **COMMON** *Red Samolus*
Locality Seneca Co. N.Y. Date May 24 '83

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Thick, woody, horizontal*
Stem *Woody, erect, branched*
Leaves *Large, ovate, serrated, long petiole, downy*
Inflorescence *Solitary, terminal, cymose*
Calyx *5, small, persistent, sepals*
Sepals *2, oblong, lanceolate, imbricated*
Corolla *5, large, spreading, lobes*
Petals *2, linear, the inner imbricated*
Stamens *5, distinct, gynandrous, anthers*
Anthers *Oblong, 4-celled, introrse, marcescent*
Pistil *1, short, thick style, compound*
Stigma *1, truncate, 2-lobed*
Ovary *Superior, 1-celled, 5-lobed, of*
Fruit *Triangular, elongated*
Seeds *Numerous*

Remarks. *Flowers short-lived, it is the pollen is not very abundant - insects for fertilization*

Class *Eudicotyledons*
DIVISION *Polypetalae*
ORDER *Malvales*
Name. { **SCIENTIFIC** *Albizia leonensis*
 { **COMMON** *Siamese tree*
Locality. *India, Assam, ...* **Date** *Jan 21/16*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root	fibrous, perennial
Stem	Herbaceous, erect 8'-16' glabrous, short rootstock
Leaves	Linear, sessile, 3 in. long, imbricate-ovate, entire
Inflorescence	Solitary terminal, cymose, regular
Calyx	Green, rosaceous, persistent, inferior
Sepals	3, long-ovate, imbricated
Corolla	White, rosaceous, tubular, 5-lobed
Petals	3, ovate, apex pointed, imbricated
Stamens	6, distinct, exserted
Anthers	Linear, 4-celled, longitudinal, innate
Pistil	1, 3 styles compound
Stigma	3, feathered
Ovary	Superior, 1-celled, 3-lobed
Fruit	indehiscent, berry
Seeds	Numerous

Remarks. Low peduncle bearing the ovary raised beneath the leaves

Class Endogenous

DIVISION Vitisoidae

ORDER Liliaceae

Name. { SCIENTIFIC *Tillium* *carolinense*

{ COMMON Woodstock *Tillium*

Locality ... *Willow* ... **Date** ... *July 2, 1883*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous

Stem Herbaceous, decumbent, 3'-6'

Leaves Opposite - lower petioled, upper sessile
cordate - oval, entire.

Inflorescence Axillary, solitary, perfect, raceme

Calyx Green, scarious, persistent, above, superior.

Sepals 5 lanceolate, imbricated.

Corolla White, scarious, persistent, hypogynous.

Petals 5, 2 parted, imbricated

Stamens 3-10, distinct, hypogynous.

Anthers Reniform, 1 celled, transverse, sessile.

Pistil 1, no style, compound

Stigma 3, bicar.

Ovary Superior, 1 celled, free central

Fruit White from with with 10 parts, oblong pod

Seeds Numerous, round each with two hilum.

Remarks. It is very common in our forest
with small cultivated ground.

Class Exogonous

DIVISION Polypetalous

ORDER Caryophyllales

Name. { **SCIENTIFIC** *Lycium lucidum*

 { **COMMON** Common in forest on the hillside

Locality Rich spots garden etc. Williamsia. **Date** May 26 1893

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, æstivation.
Corolla. — Color, form, cohesion, adnation.

Root
 Stem *Herbaceous, erect, simple 1°-2°*
 Leaves *Alternate, sessile, linear lanceolate, acute, serrated, upper and lower surfaces scabrous.*
 Inflorescence *Axillary, sessile, cymose*
 Calyx *Yellowish, tubular, 5-lobed, inferior*
 Sepals *2-4 unequal divisions*
 Corolla *Pale yellow, tubular, 5-lobed, lobes unequal, 2-lipped*
 Petals *2 lips, upper 2-lobed, lower 1-lobed, lower lobe shorter*
 Stamens *4, distinct, epipetalous*
 Anthers *Irregular, 2-celled, longitudinal*
 Pistil *1, 1 long slender style, compound*
 Stigma *1, round*
 Ovary *Superior, 2-celled, axillary*
 Fruit *pod*
 Seeds *Many*

Remarks. *The lobes of the leaves beneath the flowers are more showy than the flowers being a deep scarlet.*

Class *C. - 9 arous*
DIVISION *Monopetalous*
ORDER *Scrophulariaceae*
Name. { **SCIENTIFIC** *Castilleja leucostachya*
 { **COMMON** *Scarlet Painted Leaf*
Locality *Wet gravelly soil, Williston Cross* **Date** *May 26 '98*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *Woody, fibrous*

Stem *Herbaceous, decumbent, simple, 2' tall*

Leaves *Oval, acute, sessile, venation - cordate
abscise-venate*

Inflorescence *Spike-like, many perfect flowers*

Calyx *Green, persistent, joining ovary, imbricate*

Sepals *4, ovate, imbricate*

Corolla *Pale blue, rotate, 5-lobed, hypogynous*

Petals *4, lobes, imbricate, irregular*

Stamens *2 distinct, epipetalous*

Anthers *4-ovate, 2-celled, longitudinal*

Pistil *1, trilocular, compound*

Stigma *1, capitate*

Ovary *Superior, 2-celled, axillary*

Fruit *Longitudinally, flat pod*

Seeds *Many*

Remarks. *It is a small plant with inconspicuous flowers on very leafy stems. It is growing out of a leaf. Dark stripes of purple on the stem and stamens blue*

Class *Croceales*

DIVISION *Monocotyledonae*

ORDER *Scrophulariales*

Name. { **SCIENTIFIC** *Verticilla corymbiflora*

{ **COMMON** *Blue topped verticilla?*

Locality *W. side of ... 1911 ... near ...* **Date** *May 1911*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Small, fibrous
Stem slender, upright, terete
Leaves alternate, petiole long, lanceolate, cordate base
Inflorescence axillary, raceme, many
Calyx absent
Sepals 5
Corolla absent
Petals 5
Stamens many in head, distinct
Anthers
Pistil many in head, distinct
Stigma linear
Ovary 1 cell
Fruit 1 cell
Seeds 1

Remarks.

2' tall, close to water, in
 with water, to be found in
 on all sides

Class *Opuntia*
DIVISION *Opuntia*
ORDER *Pricklypear*
Name. { **SCIENTIFIC** *Chataraxus occidentalis*
 { **COMMON** American Pricklypear
Locality Banks of streams, California Date May 29 '88

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Amorphous fibrous

Stem Herbaceous, diffuse, 3' - 8'

Leaves Alternate, lower petiolate, ovate cuneate upper sessile, lanceolate entire.

Inflorescence Axillary, solitary, perfect, regular.

Calyx Green, persistent, 5-lobed, reflexed.

Sepals 4, oblate, imbricated.

Corolla White, rotate, lobed, hypanthium.

Petals 4 lobes, imbricated.

Stamens 2, distinct, epipetalous.

Anthers 2-celled, irregular.

Pistil 1, 1 style, compound.

Stigma 1, situated.

Ovary Superior, 2-celled, axillary.

Fruit Saccate pod.

Seeds Several.

Remarks. The flowers are very small and the corolla soon falls but the calyx is persistent.

Class E. angiosperms

DIVISION Monopetalous

ORDER Scrophulariaceae

Name. { **SCIENTIFIC** *Cleronia arcuata*

 { **COMMON** *Common Speedwell*

Locality. Waste & cultivated ground Millerton **Date** May 28 '83

4881

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Multituberous fibrous

Stem Herbaceous erect, simple, 2'

Leaves Alternate, stipulate, cordate, pubescently
oblong, serrate,

Inflorescence 2 or 3 in terminal umbel, perfect, regular.

Calyx Brown-bruffe, campanulate, 5-lobed, imbricate

Sepals 5, linear, pointed, calabate

Corolla Yellow, roseaceous, 5-lobed, imbricate

Petals 5, obovate-obcordate, base white

Stamens Many, distinct, long, yellow.

Anthers Oblong, 2 celled, longitudinal

Pistil Many, 1 persistent style, simple

Stigma 1, acute

Ovary Superior, 1 celled

Fruit Indehiscent, spheric

Seeds 1 in each ovule.

Remarks.

The flower never opens very much and the calyx is persistent

Class Eucaryous

DIVISION Polypetalous

ORDER Rosaceae

Name.

{ **SCIENTIFIC** *Scorpiocarpus*

{ **COMMON** Purple or Water Snow

Locality Low ground, Mill plain

Date May 29, 1892

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root	Fleshy fibrous
Stem	Herbaceous, erect, simple, 4'-7'
Leaves	2 radical, sessile, oblong-obovate entire
Inflorescence	Leafy spike, erect
Calyx	Pink purple, irregular, cleft, superior
Sepals	2 lobes, imbricated
Corolla	Pink purple, irregular, monopetalous, ligulate
Petals	2 irregular, lower spurred
Stamens	1, gynandrous
Anthers	2 celled
Pistil	1, one style, compound
Stigma	1, concave
Ovary	Inferior, 1 celled, 3 parietal
Fruit	Locustoid, oblong pod
Seeds	Several

Remarks. A square stalk starts from between the two leaves. The flower stands on a twisted away and the lip is turned downwards

Class *Eudagynous*
DIVISION *Petaloidous*
ORDER *Orchidaceae*
Name. { **SCIENTIFIC** *Orchis spectabilis*
COMMON *Snow Orchis*
Locality *Rich Hill, near Willratan Cross* Date *May 2, 1883*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root Multiple fibrous
 Stem Herbaceous, erect, simple, 2°, fibrous
 Leaves Alternate, sessile, stem leaves oblong, entire
 base, spatulate, toothed.
 Inflorescence Head, perfect
 Calyx White, bristly pappus, superior.
 Sepals Ovary, hair like
 Corolla Yellow, tubular, lobed, 5 sig. x. l. r. s. d.
 Petals 5 lobed, pointed.
 Stamens 5, n. n. g. r. s. d., 2-petalous
 Anthers Tricard.
 Pistil 1, 1 style, simple
 Stigma 1, 2 lobed
 Ovary Superior, 1 celled, basal
 Fruit Indehiscent, akenes
 Seeds 1,

Remarks. About 150 blue ray flowers around
 the edge of the head. 11-12 flowers on each
 stalk

Class Exogamous
DIVISION Crown of petals
ORDER Compositae
Name. { **SCIENTIFIC** *Erigeron philadelphicus*
 { **COMMON** Common T. thalassia
Locality Toward ground Willwater Mass **Date** May 29 '83

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Terrestrial, fibrous

Stem Herbarium, upright or erect

Leaves Alternate, elliptical, cordate, bright green
margin of leaf not serrated

Inflorescence Slightly branched, pedicel, regular

Calyx Green, cut solid, 5-lobed, inferior

Sepals 5, linear, acute, imbricate

Corolla Yellow, corolla, 5-lobed, imbricate

Petals 5, circular, imbricate

Stamens Several, distinct, epigynous

Anthers broadish, 2-lobed, adaxial

Pistil 1, 1 style, simple

Stigma 1, linear

Ovary Superior, 1-lobed, sessile

Fruit indurcent, alone

Seeds 1 in each ovary

Remarks. The leaves are green above with silvery grey beneath!

Class *Eragrostis*

DIVISION *Polyglotous*

ORDER *Poaceae*

Name. { **SCIENTIFIC** *Panicum Ageratum*

 { **COMMON** *Silvery Sanguinalis*

Locality From hill's *William's* **Date** *May 29 '83*

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Woody, fibrous*

Stem *Terrestrial, erect, branching, woody*

Leaves *Alternate, ovate, petioled, to 5 cm long, 2-3 cm wide, serrated, green, glabrous*

Inflorescence *Terminal, cymose, 1-2 cm long*

Calyx *5-lobed, persistent*

Sepals *5, ovate, persistent*

Corolla *5-lobed, spreading, white, 1-2 cm long*

Petals *5, lanceolate, imbricate*

Stamens *6, distinct, hypogynous*

Anthers *Long, 2-celled, dehiscing*

Pistil *1, sub-stylis, simple*

Stigma *capitate*

Ovary *superior, 1-celled, 1-lobed*

Fruit *Induriscence, oblong, red berry*

Seeds *3 or 4*

Remarks. *In the first of flowers, female, is an insect-viper, it is immediately rise and strike the stigma. The wood and inner bark are yellow.*

Class *Caryophyllales*

DIVISION *Rubiales*

ORDER *Rubiaceae*

Name. { **SCIENTIFIC** *Berberis vulgaris*

 { **COMMON** *Common Barbary*

Locality *Collected from the hill side, ...* **Date** *May 30, 1888*

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root woody tap root

Stem herbaceous, dist. ascending, 1 1/2 ft. high

Leaves alternate, petiolate, pinnately divided
divided about

Inflorescence terminal, corymbose, regular

Calyx yellowish green, woody, 5 lobes, lobes inferior

Sepals 5, opposite, imbricated

Corolla yellow, viscidous, papilionaceous, vexillary

Petals 4, oblong, imbricated

Stamens 12, 20, distinct, intraxillary

Anthers oblong, 2 celled, intraxillary

Pistil 1, axillary, compound

Stigma 1, indistinct

Ovary superior, oblique, 1 locular

Fruit white, from base of stem, 1 loc

Seeds 2

Remarks.

It has a strong odor of the ...
 ...
 ...

Class *Leguminosae*

DIVISION *Papilionales*

ORDER *Rhizobiales*

Name.

SCIENTIFIC *Chilodactylon*

COMMON *Chilodactylon*

Locality West coast of India

Date May 3, 1888

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *Caesalpinia lebrun.*

Stem *Terraeis, procumbent,*

Leaves *Alternate, stipulate, pinnate, 3-5 leaflets.*
Leaflets opposite serrate

Inflorescence *Axillary, solitary, terminal, regular, long-pedice,*

Calyx *Gather, succulent, polysaloni, inferior*

Sepals *5, elliptical, undulate, convolute*

Corolla *White, roseaceous, polyctaloni, hypogynous*

Petals *5, elliptical, imbricated*

Stamens *Many, distinct, perigynous*

Anthers *Oblong, 2-celled, longitudinal*

Pistil *Many, 1 style, simple*

Stigma *1, capitate*

Ovary *Superior, sessile*

Fruit *Dehiscent, -sterna*

Seeds *1 in each ovary,*

Remarks. This is smaller, earlier and earlier
 than the blackberry in which it
 is persistent.

Class *Extraneae*

DIVISION *Leguminosae*

ORDER *Rhizales*

Name. { **SCIENTIFIC** *Rubus van dermeulenii*

{ **COMMON** *Low Blackberry or Strawberry*

Locality *Recepe, Marathwada, Dist. Nanded* **Date** *May 20, 1892*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, æstivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem A. loose, erect,
Leaves Alternate, petioles pinnate, 5 leaflets,
 serrate lobes, serrate,
Inflorescence Stipitate in catkins, with 2-3 in diameter
Calyx 9 mm, tubular, 5-lobed, ^{superior}
Sepals 4 lobes, ^{superior}
Corolla Absent
Petals Absent
Stamens 3-10 imbricate, distinct
Anthers 4-5 long, 2-lobed, longitudinal
Pistil 1, ^{short} style, simple
Stigma 2, capitate
Ovary Superior, hypogynous, 2-lobed
Fruit Indurulent, short oval nut
Seeds 1, irregular, lobed

Remarks.

The bark of the root is very
 thin, and is used in some
 cases as a substitute for
 the bark of the root.

Class

Ergonous

DIVISION

Aptalae

ORDER

Juncaceae

Name.

SCIENTIFIC

"Carex" sp.

COMMON

"Well" or "Dog" Bark

Locality

N. W. 1/4 sec. 10, T. 11 N., R. 10 W., S. 10. Date: May 20, 1883.

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root	Woody, tap root
Stem	Suffrutescent, erect, branched
Leaves	Alternate, stipulate, serrately compound lanceolate, usually sessile
Inflorescence	Terminal, pedicel, regular
Calyx	Green, sessile, located inferior
Sepals	5, teeth
Corolla	White, 5-merous, 1-lobed lobes, hypogynous
Petals	5, lanceolate, imbricate
Stamens	5, distinct, hypogynous
Anthers	Oblong, 2-celled, longitudinal
Pistil	1, 2 styles, compound
Stigma	2, linear
Ovary	Superior, 2-celled, subdivided
Fruit	Indehiscent, dry fruit splitting into 2 akenes
Seeds	2, winged

Remarks. The petals turn over in some
 Bridged hollow with and is slightly
 pointed.

Class *Exogonum*

DIVISION *Rubiaceae*

ORDER *Umbelliferae*

Name. { **SCIENTIFIC** *Centropogon*
COMMON *Beeson's*

Locality *at ...* **Date** *...*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple, fibrous.
Stem Herbaceous, woody, terete, 2-4, straggling.
Leaves Alternate, simple, ovate, serrate.
Inflorescence Solitary, axillary, sessile.
Calyx 5, lanceolate, imbricate, inferior.
Sepals 4, lanceolate, imbricate.
Corolla 5-lobed, tubular, slightly inflated, imbricate.
Petals 5, oblong, spatulate, imbricate.
Stamens 5, slightly unequal, anthers, anisogamous.
Anthers Oblong, ^{pointed} 4-celled, longitudinal, versatile.
Pistil 1, 1 style, compound.
Stigma 1, sessile.
Ovary Superior, 3-celled, 3-locular.
Fruit Septicidal, capsule.
Seeds Numerous, ariliferous.

Remarks.

It has quite large white which is fringed or toothed, and the tube is half as long as the flower. It is branching.

Class Eraginous**DIVISION** Polypetalous**ORDER** U. diadelphous**Name.** { **SCIENTIFIC** *Viola carolina*

{ **COMMON** *Sig. carolin.*

Locality Longwood, N. Carolina, U.S.A. **Date** May 3, 1902

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.**Stamens.** — Number, cohesion, adnation.**Anthers.** — Form, cells, dehiscence.**Pistil.** — Number, parts, cohesion.**Stigma.** — Number, kind.**Ovary.** — Adnation, number of cells, placentation.**Fruit.** — Dehiscence, kind.**Seeds.** — Number, kind.

Root Fibrous
Stem Herbaceous, erect, 6' 12' glabrous
Leaves Alternate, sessile, pinnobovate, elliptical-obovate, entire
Inflorescence Solitary, terminal, perfect, regular
Calyx Yellow, campanulate, polysepalous inferior
Sepals 3, elliptical, imbricated
Corolla Yellow, campanulate, polypetalous, hypogynous
Petals 3, elliptical, imbricated
Stamens 6, distinct, hypogynous
Anthers Linear, 2-celled longitudinal
Pistil 1, 3 styles, campanulate
Stigma 3, feathery
Ovary Superior, 3-celled axillary
Fruit Loculicidal, 3-lobed pod
Seeds Several, roundish

Remarks.

Perianth granular roughened
 inside,

Class Endogena**DIVISION** Petaloidea**ORDER** Liliaceae**Name.**

SCIENTIFIC

A. pulchra, Dipolite

COMMON

B. pulchra

Locality

Main road, ... Date ... 80'83

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root *See C. Hitchcock's*
Stem *Herbaceous, erect, simple, 2'-4', subterrestrial.*
Leaves *Opposite, sessile, oval-oblong, subulate, serrated, venous.*
Inflorescence *Terminal, cymose, ligulate, irregular.*
Calyx *Greenish yellow, persistent, lobed, callos, inflexed.*
Sepals *3, imbricate, imbricated.*
Corolla *Greenish yellow, corolla tube, 5-lobed, lobes, 2-3, 2-3.*
Petals *8, elliptical, imbricated.*
Stamens *6, distinct, hypogynous.*
Anthers *4-lobed, 2-celled, longitudinal, versatile.*
Pistil *1, 1-2-lobed, compound.*
Stigma *1, obtuse.*
Ovary *superior, 2-3 celled.*
Fruit *indeciscent, blue berry.*
Seeds *present.*

Remarks.

Found in the West Indian Islands of New York.
The loss of the pinked scale is treated at
see by the broad leaves.

Class *Endogonous*DIVISION *Polycarpeae*ORDER *Umbellales***Name.**SCIENTIFIC *Chimaphila*COMMON *Chimaphila*Locality *West coast of New York* Date *May 21, 1883*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Woody, fibrous*
Stem *Herbaceous, erect 2'-6' rising, striate*
Leaves *Opposite, sessile, ovate, acuminate, glabrous*
Inflorescence *2-8 branched, pedicels, subspherical*
Calyx *5, many, subobovate, pale, all lobes, imbricate*
Sepals *7, long, imbricate, imbricate*
Corolla *White, 2-lipped, imbricate, 5-merous*
Petals *4, oblong, imbricate*
Stamens *4, slightly unequal, imbricate, epipetalous*
Anthers *Oblong, 2-celled, longitudinal, imbricate*
Pistil *1, 2-lobed, simple*
Stigma *2-lobed*
Ovary *Subglobose, 2-celled, 2-ovular*
Fruit *Subglobose, 2-celled*
Seeds *Several*

Remarks. *A few scales on the stem but all of the leaves are sessile at the base & the long slender, striate of the flowers.*

Class *Caryophyllales*

DIVISION *Malvaceae*

ORDER *Primulaceae*

Name. { **SCIENTIFIC** *Liriodendron chinensis*
COMMON *American Chickweed in the green or Star Flower.*

Locality *Low open woods, Millersburg, Pa. Date: June 21 '93*

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.
Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, aestivation.
Corolla. — Color, form, cohesion, adnation.

Root scanty fibrous
Stem herbaceous, erect; 3-10, slightly branching
Leaves Epiflorous, sessile, oblong, entire
 length 10-15
Inflorescence Axillary, 2 or 3 on slender pedicel, perfect regular
Calyx Green, persistent, papery, lobes 5
Sepals 5, oval-oblong, imbricated
Corolla White rosaceous, papery lobes, hypogynous
Petals 5, obovate, imbricated
Stamens 10, distinct, hypogynous
Anthers Reniform, celled, 4-angled, sessile
Pistil 1, 3 styles, simple
Stigma 3, flattened
Ovary Superior, 1-celled, bicentral
Fruit Tubercular, 1-seed
Seeds 1

Remarks. The petals longer than the sepals quite conspicuous.

Class Erythrorhous
DIVISION Pentapetalous
ORDER Caryophyllaceae
Name. { **SCIENTIFIC** *Artemisa latiflora*
COMMON Side-flowering Sandal
Locality Gravelly soil, Dillapalan Date: May 31, 83

47

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Terrestrial tap-root

Stem Herbaceous erect, 1-2°

Leaves Alternate, 4-lobed, 1-2 in. long, 1/2-1 in. wide, deeply lobed, serrated, glabrous, petioles short

Inflorescence Axillary, polygamous cymes

Calyx 5, succulent, lobes 5-6 lines long

Sepals 5, succulent, lobes 5-6 lines long

Corolla 5, succulent, lobes 5-6 lines long

Petals 5, imbricate, lobes 5-6 lines long

Stamens 5, distinct, epipetalous

Anthers Obovate, 2-celled, longitudinal

Pistil 1, 2-lobed compound

Stigma 2, sessile

Ovary Superior, 2-celled, suspended

Fruit 2, indehiscent, akers

Seeds 2,

Remarks. The outer leaflets are 2 lobed
 many staminate flowers on head on
 small kind of fruit, "..."

Class *Exogonae*

DIVISION *Polypetales*

ORDER *Widelliales*

Name. { SCIENTIFIC *Lanicula Canadensis*

{ COMMON *Lanich*

Locality *Wood, Mich. ...* Date *May 8. 83*

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *Fleshy fibrous*

Stem *Herbaceous erect simple 6'-18'*

Leaves *basal, pitcher or tubular-shaped, winged on inner side, sort of hood at opening.*

Inflorescence *Solitary, terminal, perfect, large, axillary.*

Calyx *Purple, scarious, 5-lobed, tubular, inferior*

Sepals *5, ovate, imbricate.*

Corolla *Light purple, scarious, 5-lobed, hypogynous.*

Petals *5, petaloid-shaped, imbricate.*

Stamens *Many, distinct, hypogynous.*

Anthers *2-lobed, curved, 2-celled, longitudinal, versatile*

Pistil *1, short style, compound.*

Stigma *1, tubular-shaped.*

Ovary *superior, 2-celled, axillary*

Fruit *Septicidal, pod*

Seeds *Many, reniform.*

Remarks.

The ^{calyx} is ^{short} tubular at base of calyx. All of the foliage scarious. The petals cover the large 5-angled scarious lobes of the calyx and fill the space between the lobes.

Class *Exogonous*

DIVISION *Poly petalous*

ORDER *Sarcocornaceae*

Name. { SCIENTIFIC *Sarcocornia Purpurea*

COMMON *Purple Sarcocornia Pitcher Plant*

Locality *Guatemala, Dept. Peten, near Usumacinta* Date *May 31, 1883*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Herbaceous, erect, simple, large rhizome
Leaves Radical, petiolate, narrowly cordate, entire
Inflorescence Solitary, terminal, perfect, regular
Calyx Green yellow, rosaceous, polypetalous, inferior
Sepals 6, orbicular, imbricated
Corolla Yellow rosaceous, 10-lobed, hypogynous
Petals Many, small thickish, orbicular
Stamens Many, distinct, hypogynous
Anthers 2, linear, 2-celled, longitudinal
Pistil 1, axillary, compound
Stigma 1, radiale
Ovary Superior, many celled, axillary
Fruit Pod
Seeds Many, nut-like seed

Remarks.

Leaves and flowers float on water. The ovary is truncate on top. The petals resemble the stamens of which there is very many.

Class Exogonous**DIVISION**

Polypetalous

ORDER

Nymphaeaceae

Name.

SCIENTIFIC

Nuphar Advena

COMMON

Yellow Pond Lily or Spotted-lily

Locality

Pond Sunday, Willralan Mass. Date May 31 '93

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Fibrous

Stem Herbaceous, erect 1-2', rhizomatous

Leaves Terminal, palmate, twice ternate, long petiole
Oblong-oval, acute, toothed.

Inflorescence Terminal, compound umbel, long pedicels

Calyx Green, 5-lobed, lobes small, persistent

Sepals 5, small, lobes

Corolla White, 5-lobed, lobes spreading

Petals 5, oblong, white, persistent

Stamens 5, distinct, long, anthers

Anthers Oblong, 2-celled, longitudinal, versatile

Pistil 1, 5-lobed, compound

Stigma 5, persistent

Ovary Superior, 5-celled, axillary

Fruit Spherical, green

Seeds 5

Remarks. The flowers of the above are found on separate stalks although they start from the same place on the root. Root very aromatic.

Class *Angiosperms*

DIVISION *Polypetalae*

ORDER *Malvaceae*

Name. { **SCIENTIFIC** *Azadirachta indica*

 { **COMMON** *Indian Sassafras*

Locality *Woods, near the station* **Date** *June 2 '98*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Small, thick, fleshy, perennating
Stem Herbaceous, erect, branching, 1' - 2'
Leaves Alternate, stipulate, bipinnately 3-divided,
 rachis, striate, entire
Inflorescence Terminal, dense, raceme, perfect or imperfect
Calyx Green, campanulate, 5-toothed, inferior
Sepals 5, bilobed
Corolla Light red, tubular, 2-lipped, hypogynous
Petals 2, lvs
Stamens 6, monadelphous, epipetalous
Anthers 6, long, 2-celled, longitudinal
Pistil 1, style, simple
Stigma 1, oblong
Ovary 1, inferior, 1-celled
Fruit Indurated, capsular
Seeds 1, reniform

Remarks. It was originally introduced from Europe but is now very common in pastures

Class Exogonous
DIVISION Leguminosae
ORDER Leguminosae
Name. { **SCIENTIFIC** *Trifolium pratense*
 { **COMMON** Red clover
Locality W. Virginia, near Charleston, W. Va. **Date** June 2, 1883

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multifide fibrous

Stem fibrous, erect

Leaves Opposite, alternate, 7 large leaflets,
obovate-spatulate, serrate

Inflorescence Terminal, compound raceme, upright

Calyx White, persistent, imbricate, inferior

Sepals 5, oblong, imbricate, reflexed

Corolla White, purple or yellow spotted, viscidose, papilionaceous, keel

Petals 5, irregularly cordate, imbricate

Stamens 7, didynamat, by long process

Anthers Oblong, erect, coespiral

Pistil 1, long style, compound

Stigma 1, round

Ovary Superior, 2 celled, loc 1

Fruit Ubbanary, beak long

Seeds 1-3, hard coated chestnut like

Remarks. Fruit shaped like with dense
pubescence and very large handsome racemes
of flowers.

Class *Leguminosae*

DIVISION *Trifolium*

ORDER *Sapindaceae*

Name. { SCIENTIFIC *Aesculus hippocastanum*

 { COMMON *Common horsechestnut*

Locality *Texas on rich soil* Date *June 2 '83*

ORDER OF DESCRIPTION.

Root. — Kind.**Stem.** — Class, character, direction of growth, height.**Leaves.** — Arrangement, kind, form, margin.**Inflorescence.** — Arrangement, kind.**Calyx.** — Color, form, cohesion, adnation.**Sepals.** — Number, form, aestivation.**Corolla.** — Color, form, cohesion, adnation.

Root Multiple, fibrous
Stem Terrestrial, erect, branching, 3'-6"
Leaves Alternate, petiolate, oval-elliptical
 entire
Inflorescence Terminal, sessile, pedicel regular
Calyx Green, rotate, lobed, inferior
Sepals 5, white
Corolla Rose pink, funnel form, lobed by 5 y. rows
Petals 5 lobes, lanceolate, inner concave
Stamens 5, distinct, hypogynous
Anthers Above, 2 curved, free
Pistil 1, 1 very long style, 2 ovules
Stigma 1, 2 curved
Ovary Superior, 5 celled, axillary
Fruit Scleroid, elongated
Seeds Many

Remarks.

The calyx is very small and the style and ovary are adorned with fine hairs in young.

Class Euphorbia

DIVISION Euphorbiatales

ORDER Euphorbiales

Name.SCIENTIFIC *Apuleia* *puberula*

COMMON

..... Purple *Apuleia* or Purple Flowered Sarsaparilla

Locality Swampy low woods, in the hills near Date June 253

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.
Stamens. — Number, cohesion, adnation.
Anthers. — Form, cells, dehiscence.
Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.
Ovary. — Adnation, number of cells, placentation.
Fruit. — Dehiscence, kind.
Seeds. — Number, kind.

Root *Multiple, fleshy, woody.*
Stem *Herbaceous, erect, 2°-8° joints.*
Leaves *Alternate, petioled, faintly 8' divided
 serrated, 3' left, crumpled.*
Inflorescence *Solitary, axillary, terminal, cymose.*
Calyx *Yellow, succulent, 5-lobed, inferior.*
Sepals *5, ovate, imbricated.*
Corolla *Yellow, viscid, papilionaceous, hypogynous.*
Petals *5, elliptical, imbricated.*
Stamens *Many, didynamous, hypogynous.*
Anthers *Oblong, 2-celled, long-studinal.*
Pistil *Many, 1-seeded, simple.*
Stigma *1, dorsal.*
Ovary *Superior, 1-celled, 2-ovuled.*
Fruit *Indehiscent, akene.*
Seeds *1 in each ovary.*

Remarks. *Stem hollow, stem covered with
 short hairs.*

Class *Exogonous*
DIVISION *Polemoniaceae*
ORDER *Ranunculaceae*
Name. { **SCIENTIFIC** *Ranunculus Pennsylvanicus*
 { **COMMON** *Bristly Buttercup*
Locality *Low ground, Wilkeson Mass. Date June 2, 83.*

105

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, æstivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple, fibrous

Stem Terrestrial, upright, 3'-6'

Leaves Opposite, sessile, wedge-oblong, obtuse
 ~~sinuate~~ serrate.

Inflorescence Raceme, upright, regular.

Calyx Green, succulent, prothyraceous in color

Sepals 5, ovate-lanceolate, imbricate

Corolla White-lilac blue, rotate, divided, hypogynous

Petals 5, lobes, ovate, imbricate

Stamens 2, distinct, epipetalous

Anthers Corolla, curved, longitudinal

Pistil 1, monotypic, compound

Stigma 1, sessile

Ovary Superior, 2-celled axillary

Fruit 2-sam. sess. silicle

Seeds 4

Remarks. The calyx looks very much like a sort of leaf. The pet. is wedge to obcordate. Siliques persistent.

Class Eragraceae

DIVISION Monopetalae

ORDER Scrophulariales

Name. { **SCIENTIFIC** *Veronica thibetensis*

 { **COMMON** Common Ground

Locality Dry ground, Tilitaban Cras Date June 28.9

ORDER OF DESCRIPTION.

Petals. — Number, form, æstivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root Multiple fibrous
Stem Termination, decumbent, 2-4"
Leaves Alternate, separate, 3-nerved, ovate,
 jointed, doubly toothed
Inflorescence Axillary, issue compound, perfect, regular,
Calyx Green, rotate, cleft inferior
Sepals 5, lanceolate, imbricated
Corolla White, scarious, poly-petalous, perigynous
Petals 5, oblong, imbricate
Stamens Many, distinct, perigynous
Anthers 2-fld, 2-celled, longitudinal
Pistil Many, 1 style, simple
Stigma 1, feathered
Ovary Superior, 1-celled, basal
Fruit Indehiscent, stercor
Seeds 1 in each drupe like fruit

Remarks. The berry when ripe falls off of the long receptacle & has 2 or 3 seeds.

Class *C. + agnones*

DIVISION *Poly-petalous*

ORDER *Rhaceae*

Name. { **SCIENTIFIC** *Rubus occidentalis*
 { **COMMON** *Black Raspberry or Thimbleberry*

Locality *Fence corners, etc., Willvata Cross* **Date** *June 4 '88*

104

ORDER OF DESCRIPTION.

Root. — Kind.
Stem. — Class, character, direction of growth, height.
Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.
Calyx. — Color, form, cohesion, adnation.
Sepals. — Number, form, æstivation.
Corolla. — Color, form, cohesion, adnation.

Root	Multiple fibrous
Stem	Erect, branching, 2-3'
Leaves	Alternate, stipulate, wedge-shaped, serrate; glaucous, serrate
Inflorescence	Terminal, cymose, perfect, regular
Calyx	Green, 5-lobed, slightly persistent
Sepals	5, lanceolate
Corolla	White-rose, resaccus, lobes 5, imbricate
Petals	5, orbiculate, imbricate
Stamens	Many, distinct, free
Anthers	2-3, 2-lobed, inserted on filaments
Pistil	5, single
Stigma	5, distinct
Ovary	5, inferior, locules 5
Fruit	Longitudinal, 5-lobed
Seeds	5-10 in each loc.

Remarks. Leaves are dark green and glossy on the upper surface

Class Erogenous

DIVISION Polypetalous

ORDER R. G. G. G.

Name. { **SCIENTIFIC** *Sida*
 { **COMMON** ...

Locality ... **Date** June 4, 1880

ORDER OF DESCRIPTION.

Petals. — Number, form, aestivation.

Stamens. — Number, cohesion, adnation.

Anthers. — Form, cells, dehiscence.

Pistil. — Number, parts, cohesion.

Stigma. — Number, kind.

Ovary. — Adnation, number of cells, placentation.

Fruit. — Dehiscence, kind.

Seeds. — Number, kind.

Root *Herb. fibrous*

Stem *Herbaceous, erect, 1-3°*

Leaves *Alternate, short petioled, lance-oblanceolate, double cut imbricated.*

Inflorescence *terminal, dense, spike, perfect*

Calyx *5-merous, cup shaped, mucropulous, superiorly lobed, split open at anthesis.*

Sepals *5, irregular, imbricated, long-persistent.*

Corolla *5, irregular, imbricated, long-persistent.*

Petals *5, 2 small*

Stamens *4 distinct, protuberant, distinct on axis.*

Anthers *long, 4-5, 2-3, 2-3, 2-3*

Pistil *1, bicarpitry, compound.*

Stigma *1, sessile, 2-lobed.*

Ovary *superior, sessile, bicarpitry*

Fruit *1, bicarpitry, 2-lobed*

Seeds *2*

Remarks. *It was the 1st time I saw the plant and that I saw it was not so deeply cut.*

Class *Angiosperms*

DIVISION *Corniflorae*

ORDER *Scrophulariales*

Name. { **SCIENTIFIC** *Ipomoea pes-caprae*

{ **COMMON** *Ipomoea pes-caprae*

Locality *...* **Date** *...*

109

ORDER OF DESCRIPTION.

Root. — Kind.

Stem. — Class, character, direction of growth, height.

Leaves. — Arrangement, kind, form, margin.

Inflorescence. — Arrangement, kind.

Calyx. — Color, form, cohesion, adnation.

Sepals. — Number, form, aestivation.

Corolla. — Color, form, cohesion, adnation.

Root Multiple fibrous
Stem Herbaceous, erect, simple 5-12'
Leaves Alternate, stipulate, oblanceolate, entire.
Inflorescence Axillary, solitary, perfect, cymose.
Calyx Greenish yellow, viscidous, polydehiscens, superior.
Sepals 2, ovate, papery, fused.
Corolla Yellow, viscidous, polydehiscens, perigynous.
Petals 4, obcordate, concave.
Stamens 8, distinct, epipetalous
Anthers Oblong, 2 celled, longitudinal
Pistil 1, 1 style, superior
Stigma 1, 4 lobed
Ovary Superior, 1 celled, central?
Fruit oblong, 1 seed
Seeds many

Remarks. The ped. is sessile and the flower is borne in the end of the ped.

Class Exogynous
DIVISION Polypetalous
ORDER Cambricaceae
Name. { **SCIENTIFIC** *Oenothera purpurea*
 { **COMMON** Yellow-flowered Annual Evening Primrose
Locality Fields W. of New Mass. Date June 7 '83

ALPHABETICAL INDEX—SCIENTIFIC AND COMMON.

NAME.

PAGE

NAME.	PAGE
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	

ALPHABETICAL INDEX—SCIENTIFIC AND COMMON.

NAME.

PAGE

NAME.	PAGE
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	
.....	



