+QK117

.T6

c.2

COMPENDIUM OF THE FLORA

OF THE

Northern and Middle States.

CONTAINING GENERIC AND SPECIFIC DESCRIPTIONS OF ALL THE
PLANTS, EXCLUSIVE OF THE CRYPTOGAMIA, HITHERTO FOUND
IN THE UNITED STATES, NORTH OF THE POTOMAC.

BY JOHN TORREY, M.D.

PROFESSOR OF CHEMISTRY IN THE WEST-POINT MILITARY ACADEMY,
PRESIDENT OF THE LYCEUM OF NATURAL HISTORY OF NEW-YORK,
MEMBER OF THE PHYSIOGRAPHICAL SOCIETY OF LUND, SWEDEN,
OF THE WERNERIAN SOCIETY OF EDINBURGH, &c.

NEW-YORK:

STACY B. COLLINS, 65 FULTON-STREET

J. & J. Harper, Printers

.....
1826.

+ QK117

T6

c.2

SOUTHERN DISTRICT OF NEW-YORK, ss.

BE IT REMEMBERED, that on the 16th day of September, in the fifty-first year of the Independence of the United States of America, STACY B. COLLINS, of the said District, hath deposited in this office the title of a book, the right whereof he claims, as Proprietor, in the words following, to wit:

"A Compendium of the Flora of the Northern and Middle States. Containing Generic and Specific Descriptions of all the Plants, exclusive of the Cryptogamia, hitherto found in the United States, north of the Potomac. By John Torrey, M.D. Professor of Chemistry in the West-Point Military Academy, President of the Lyceum of Natural History of New-York, Member of the Physiographical Society of Lund, Sweden, of the Wernerian Society of Edinburgh, &c."

In conformity to the Act of the Congress of the United States, entitled "An Act for the encouragement of Learning, by securing the copies of Maps, Charts, and Books, to the authors and proprietors of such copies, during the times therein mentioned." And also to an Act, entitled, "An Act, supplementary to an Act, entitled an Act for the encouragement of Learning, by securing the copies of Maps, Charts, and Books, to the authors and proprietors of such copies, during the times therein mentioned, and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

JAMES DILL,
Clerk of the Southern District of New-York.

TO
WILLIAM COOPER, ESQ.
OF NEW-YORK.

THIS VOLUME
IS DEDICATED, AS A TESTIMONY
OF RESPECT FOR HIS
ATTAINMENTS AS A NATURALIST,
AND AS
AN EXPRESSION OF
HIGH ESTEEM FOR HIS VIRTUES,
BY HIS FRIEND,
THE AUTHOR.

32103

ADVERTISEMENT.

THIS little Work, which was announced about two years since, in the Preface to the Author's Flora of the Northern and Middle States, is at length offered to the Public. His appointment to the Chair of Chemistry, in the Military Academy of West-Point, shortly after the first volume of that work was published, unavoidably interrupted his botanical pursuits; but he has now resumed them with unabated zeal. He trusts that with his present means of research and accumulated materials, the remainder of the work will at least equal that which has already been published, and received with so much indulgence by our botanists. Considerable progress has been made in preparing it for the press, and it will be completed with all the speed that is consistent with its faithful execution.

This Compendium, which is after the model of Smith's *Compendium Floræ Britannicæ*, it is hoped will be found useful to students of Botany in the Northern and Middle States, and also to those who have made greater progress in the science, as its small size will enable them to use it without inconvenience in their herborizations. It contains synoptical descriptions of all the plants described in

the author's larger work, together with the *habitat*, or place of growth of each plant, its time of flowering, duration, and such other of the more important properties as are not contained in the specific character. An Index of the principal synonyms with the names to which they correspond in this work, will be found at the end of the volume.

West-Point, Sept. 1st, 1826.

NOTICE.

THE Abbreviations will probably be understood by most of those who will use this work. For the benefit of younger students, however, those which might not be readily known are here explained.

<i>alt.</i> alternate.	<i>in.</i> inch.	<i>sol.</i> solitary.
<i>anth.</i> anther.	<i>lob.</i> lobe.	<i>wh.</i> white.
<i>ber.</i> berry.	<i>num.</i> numerous.	☉. annual.
<i>cal.</i> calyx.	<i>leg.</i> legume.	♂. biennial.
<i>cor.</i> corolla.	<i>pet.</i> petal.	℥. perennial.
<i>fl.</i> flower.	<i>ped.</i> peduncle.	℥. shrub or tree.
<i>fr.</i> fruit.	<i>sm.</i> small.	§. naturalized.
<i>ft.</i> foot.	<i>tub.</i> tubular.	+. doubtful.
<i>gr.</i> green.	<i>seg.</i> segment.	

I. MONANDRIA.

I. MONOGYNIA.

1. SALICORNIA. *Cal.* turbinate, entire, somewhat ventricose, succulent. *Cor.* 0. *Stam.* 1-2. *Style* bifid. *Seed* 1, covered by the inflated calyx.
2. HIPPURIS. *Cal.* entire, very small. *Cor.* 0. *Style* received into a groove of the anther. *Stig.* simple. *Seed* 1.

II. DIGYNIA.

3. CALLITRICHE. *Cal.* inferior 2-leaved. *Pet.* 0. *Cap.* 2-celled, 4-seeded, compressed.
4. BLITUM. *Cal.* 3-cleft. *Cor.* 0. *Seed* 1, covered by the calyx, which becomes a berry.

I. MONOGYNIA.

I. SALICORNIA. *Atriplices.* Glasswort.

1. *S. herbacea* : annual ; stem erect or branched ; joints compressed, notched at the summits ; spikes pedunculate ; calyx truncate.

HAB. Salt-marshes. Aug.—Sept. ☉. 6—10 in. high, fleshy, leafless ; style very short.

2. *S. ambigua* : perennial, procumbent, branching ; joints crescent-shaped, small ; spikes opposite and alternate ; calyx truncate.

HAB. Salt-marshes. Jul.—Aug. ♂ or ♀. Procumbent and assurgent ; anth. purplish-yellow.

2. HIPPURIS. *Haloragæ.* Mare's tail.

H. vulgaris : leaves verticillate in eights, linear-lanceolate, acute.

HAB. Ponds and lakes. Aug. ♀. Erect, simple, 1-2 ft. ; flowers axillary, sessile, minute.

II. DIGYNIA.

3. CALLITRICHE. *Haloragææ*. Water-Chickweed.

1. *C. verna* β . *intermedia*: upper leaves spathulate-obovate, inferior ones lined, obtuse, and emarginate; flowers polygamous; margin of the capsule obtuse.

HAB. Floating in shallow waters. Apr.—Aug. ☉. *Uppermost leaves stellate, 3-nerved; flowers axillary; superior ones stamenif., middle ones perfect, lowest ones pistilif.*

2. *C. autumnalis*: leaves all linear, 1-nerved, truncate, or emarginate; capsule with an acute margin; flowers all perfect.

HAB. Floating. Aug.—Sept. ☉. *Somewhat branched; superior leaves a little broader, and 3-nerved.*

2. *C. terrestris*: procumbent, diffuse; leaves oblong, uniform, rather obtuse; capsule grooved on the margin.

HAB. On wet ground. Jun.—Aug. ☉. *Creeping, small; leaves crowded; flowers polygamous; capsule very short, and broad.*

4. BLITUM. *Atriplices*.

1. *B. capitatum*: procumbent; leaves triangular-hastate; heads alternate, in a terminal, leafless spike.

HAB. Fields and waste places. ☉. Jun. *Stem branched, 1 ft.; heads round, sessile; flowers crowded, inconspicuous; calyx red when ripe.*

2. *B. virgatum*: leaves triangular-hastate; heads scattered, lateral.

HAB. In similar situations as No. 1. ☉. June. *Heads all lateral; calyx red when ripe.*

3. *B. maritimum*: calyx membranaceous; clusters axillary, spiked, naked; leaves lanceolate, attenuate at each extremity, incisely toothed.

HAB. Salt marshes. Aug. ☉. *Erect, much branched, 1—2 ft.; leaves succulent; teeth few; calyx not becoming red; seed lenticular, vertical.*

x *C. Avastini. Englm.!*

CA

II. DIANDRIA.

1. MONOGYNIA.

* *Flowers complete, inferior ; 1 petalled.*

† *Fruit a drupe or nut.*

5. **LIGUSTRUM.** *Cal.* 4-toothed. *Cor.* 4-cleft. *Berry* 2-celled ; cells 2-seeded.
6. **CHIONANTHUS.** *Cal.* 4-parted. *Cor.* deeply 4-parted ; segments long and linear. *Drupe* 1-seeded. *Nut* striate.
7. **ORNUS.** *Cal.* 4-parted. *Cor.* 4-parted ; petals long and ligulate. *Fil.* 4. *Nut* winged. *Fruit* a capsule.
8. **VERONICA.** *Cal.* 4-parted. *Cor.* rotate, 4-lobed, unequal ; the lower segment narrower. *Caps.* 2-celled, obcordate ; *seeds* few.
9. **LEPTANDRA.** *Cal.* 5-parted ; segments acuminate. *Cor.* tubular-campanulate ; border 4-lobed, a little ringent ; the lower segment narrower. *Stam.* and at length the *pist.* much exserted. *Caps.* ovate, acuminate, opening at the summit.
10. **GRATIOLA.** *Cal.* 5-parted, often with 2 bracts at the base. *Cor.* irregular, resupinate, 2-lipped ; the upper lip 2-lobed ; the lower equally 3-cleft. *Stig.* 2-lipped. *Caps.* 2-celled, 2-valved.
11. **LINDERNIA.** *Cal.* 5-parted. *Cor.* resupinate, tubular, 2-lipped ; upper lip short, reflexed, emarginate ; the lower lip trifid and unequal. *Fil.* 4 ; the two longer forked and sterile. *Caps.* 2-celled, 2-valved ; dissepiment parallel with the valves.
12. **HEMIANTHUS.** *Cal.* tubular, cleft on the under side ; border 4-toothed ; upper lip of the *cor.* obsolete ; lower 3-parted ; intermediate segment ligulate, much longer, closely incurved. *Stam.* 2 ; *fil.* bifid ; lateral fork antheriferous. *Caps.* 1-celled, 2-valved, many-seeded.
13. **CATALPA.** *Cal.* 2-parted. *Cor.* campanulate ; tube ventricose ; border 4-lobed, unequal. *Stam.* 2 fertile ; 2—3 sterile. *Stig.* bilamellate. *Caps.* long and cylindric, 2-valved ; *dissepiment* opposite to the valves.
14. **JUSTICIA.** *Cal.* 5-parted, often with 2 bracts at the

base. *Cor.* irregular, bilabiate ; upper lip emarginate ; the lower 3-cleft. *Anth.* 1—2 on each filament. *Caps.* attenuated, 2-celled, 2-valved ; *dissepiment* growing from the centre of each valve.

15. UTRICULARIA. *Cal.* 2-leaved, equal. *Cor.* personate or ringent ; upper lip erect ; lower lip spurred at the base ; palate subcordate. *Fil.* incurved, bearing the anthers within the apex. *Stig.* 2-lipped. *Caps.* 1-celled.

† † † *Seeds* 4, *naked.*

LABIATÆ.

16. LYCOPUS. *Cal.* tubular, 5-cleft, or 5-toothed. *Cor.* tubular, 4-cleft, nearly equal ; upper division broader and emarginate. *Stam.* distant. *Seeds* 4, retuse.
17. CUNILA. *Cal.* cylindrical or tubular, 5-toothed, 10-striate. *Cor.* ringent ; upper lip short, flat. Fertile *stam.* and *style* much exserted ; sterile *stam.* very short.
18. HEDEOMA. *Cal.* 2-lipped, gibbous at the base ; upper lip 3-toothed ; teeth lanceolate ; lower lip of 2 subulate teeth. *Cor.* ringent. *Stam.* 2 fertile, as long as the corolla ; 2 sterile, short.
19. MONARDA. *Cal.* 5-toothed, tubular. *Cor.* ringent ; upper lip linear, involving the filaments ; lower lip reflexed, 3-lobed.
20. SALVIA. *Cal.* subcampanulate, bilabiate ; upper lip 2—3-toothed ; lower lip bifid. *Cor.* ringent. *Fil.* transversely affixed to a foot-stalk.
21. COLLINSONIA. *Cal.* bilabiate ; upper lip 3-toothed. *Cor.* unequal, somewhat campanulate, unequally 5-lobed ; lower lobe divided into many capillary segments. *Seeds* 4 ; three of them generally abortive.

* * *Flowers superior.*

22. CIRCÆA. *Cal.* 2-leaved, superior. *Cor.* 2-petaled. *Caps.* 2-celled, not opening ; cells 2-seeded.

* * * *Flowers incomplete.*

23. LEMNA. *Cal.* 1-leaved, entire. *Cor.* 0. *Fruit* an utricle. *Seed* 1, lying horizontally, and affixed by its lower side.

24. CRYPTA. *Cal.* 2-leaved, inferior. *Cor.* 2—3-petalled, closed. *Style* almost wanting. *Stig.* obtuse. *Caps.* 2—3-celled, 2—3-valved; cells 4—5-seeded.

MONOGYNIA.

5. LIGUSTRUM. Prim, or Privet. *Jasmineæ*.

L. vulgare: leaves elliptical—lanceolate, smooth; racemes compound, crowded.

HAB. Hedges and open woods. May. $\frac{1}{2}$. 6 ft. high; leaves opposite; flowers white, paniced; berries black.

6. CHIONANTHUS. Fringe-tree. *Jasmineæ*.

C. virginica: leaves terminal; peduncles 3-flowered; leaves acute.

α . *montana*: leaves oval-lanceolate, coriaceous, smooth; panicles dense; drupe oval.

β . *maritima*: leaves obovate-lanceolate, membranaceous, pubescent; panicles very loose; drupe elliptical.

HAB. α . On mountains; β . on the sea-coast. May—June. $\frac{1}{2}$. 6—10—20 feet high; leav. oppos.; flowers in panicles.

7. ORNUS. Flowering-ash. *Jasmineæ*.

O. americana: leaves broad-ovate, serrate; the terminal one obcordate.

HAB. Shady woods. $\frac{1}{2}$. *Fl.* as in CHIONANTHUS; seeds small, winged.

3. VERONICA. Speedwell. *Rhinanthaceæ*.

1. *V. officinalis*: spikes lateral, peduncled; leaves obovate, or roundish, serrate, hairy; stem procumbent.

HAB. Dry woods and meadows. June—July. $\frac{1}{4}$. Stem diffuse; spikes erect, subradical; fl. blue.

2. *V. serpyllifolia*: raceme elongated, many-flowered; leaves ovate, crenate, smooth; capsule as long as the style; stem ascending.

HAB. Meadows. May. 4. *Stem procumbent at base ; fl. pale blue.*

3. *V. Beccabunga* ; racemes opposite ; leaves elliptical, obtuse, on short petioles, subserrate, glabrous ; stem procumbent, rooting at the base.

HAB. In water ; rare. June. 4. 1 ft. high, terete ; racemes axillary, many-flow. ; corol. blue ; caps. inflat.

4. *V. Anagallis* : racemes opposite ; leaves lanceolate, serrate ; stem erect.

HAB. In water. June—Aug. 4. 1½ ft. high, subquad-rang. ; peduncul. subpubescent ; fl. pale blue.

5. *V. scutellata* : racemes lateral and alternate ; (rarely opposite) pedicels divaricate ; leaves linear, somewhat toothed ; stem nearly erect.

HAB. In water. May—June. 4. Root creeping ; stem weak, somewhat branched ; fl. pale blue, or flesh-col.

6. *V. arvensis* : flowers solitary, subsessile ; inferior leaves petiolate, cordate, ovate, serrate ; stem leaves crenate ; floral ones lanceolate, sessile, longer than the pedicels ; segments of the calyx unequal ; capsule obcordate, compressed.

HAB. Dry hills and fields. Apr.—Aug. ☉. Stem assurgent, 2—6 in. high ; fl. pale blue ; caps. compres.

7. *V. agrestis* : flowers solitary, pedicellate, leaves petiolate, cordate-ovate, serrate, segments of the calyx equal, ovate, hairy ; stem procumbent, pubescent

HAB. Sandy fields. May. ☉. Branched, diffuse ; fl. blue, veined ; capsule didymous, subventricose.

8. *V. peregrina* : flowers solitary, sessile ; leaves oblong-serrate, rather obtuse ; stem erect.

HAB. Wet, clayey soils. May—July. ☉. Smooth ; stem branched at the base ; rad. leaves subpetiolate ; fl. small, white ; caps. obcordate.

9. *V. hederifolia* : flowers solitary ; leaves as long as the petioles, roundish-cordate, 5-lobed ; the upper ones 3-lobed ; segments of the calyx cordate, ciliate, acute ; stem procumbent.

HAB. Shady rocks. April. ☉. Stems diffuse, pubescent ; leaves somewhat fleshy ; caps. ventricose, with two seeds in each cell.

10. *V. reniformis* : stem procumbent, hispid ; leaves ses-

sile, reniform, entire, hairy, villous ; flowers axillary, solitary, subsessile.

HAB. Sandy soils. Summer. ☉. *Stems few, terete, villous ; fl. white or pale blue.*

9. LEPTANDRA. *Antirrhineæ.*

L. virginica : leaves verticillate, in fours or fives, lanceolate, serrate, petiolate.

HAB. Woods and fertile valleys. July—Aug. 24. *Stem 3—4 ft. high ; fl. white, in a long terminal spike.*

10. GRATIOLA. Hedge-hyssop. *Scrophulariæ.*

1. *G. aurea* : smooth ; leaves linear-oblong ; half embracing the stem, obscurely toothed ; leaves of the calyx equal ; sterile filaments minute.

HAB. Wet, sandy places, and in woods. Aug.—Sept. 24. *Root creeping ; stem 8—12 in. ; fl. yellow.*

2. *G. virginica* : stem pubescent, assurgent, terete ; leaves smooth, lanceolate, sparingly dentate-serrate, alternate and connate at the base ; leaves of the calyx equal ; sterile filaments wanting.

HAB. Wet meadows. July—Aug. 24. *6—8 in., branched at the base ; leaves smooth ; cor. white ; tube yellow.*

3. *G. megalocarpa* : leaves lanceolate, serrate, pubescent ; peduncles opposite, longer than the leaves ; segments of the calyx linear, as long as the globose capsule.

HAB. Ditches and pools. July—Aug. 24. *Cor. pale yellow ; caps. large.*

11. LINDERNIA. *Scrophulariæ.*

1. *L. dilatata* : leaves dilated at the base, amplexicaul, remotely toothed ; peduncles longer than the leaves.

HAB. Overflowed places. July—Sept. ☉. *Stem assurgent ; pedunc. altern. and oppos., spreading ; cor. pale purple.*

2. *L. attenuata* : leaves lanceolate and obovate, narrowed at the base ; peduncles shorter than the leaves, erect.

HAB. Overflowed places. July—Sept. ☉. *Stem erect or procumb. ; leaves serrate or dentate ; cor. pale purple.*

3. *L. monticola* : stem slender, dichotomous ; radical

leaves spathulate ; cauline ones linear, small and remote ; peduncles very long, at length reflexed.

HAB. On mountains. 4. *Leaves denticulate ; fl. pale blue.*

12. HEMIANTHUS. *Lysimachiæ.*

H. micranthemoides.

HAB. Overflowed banks of rivers. Aug.—Sept ☉. *Stem creeping ; leaves oppos., crowded ; fl. axill. ; cor. bilab. tube gibbous ; stam. inserted on the lower lip ; style declined, bifid.*

13. CATALPA. *Catalpa. Bignonice.*

C. cordifolia : leaves simple, cordate, entire ; flowers in panicles.

HAB. Fields and about houses. July. *A large tree ; leaves in threes ; fl. in large term. panic. ; caps. linear, slender ; seeds caudate.*

14. JUSTICIA. *Acanthaceæ.*

J. pedunculosa : spikes axillary ; peduncles elongated, alternate ; flowers crowded ; leaves lanceolate.

HAB. In flowing water. July—Aug. 4. *2 ft. high ; leaves long ; fl. capitate, on long axillary peduncles. pale purp. ; anth. 2, altern.*

15. UTRICULARIA. *Bladder-wort. Lentibulariæ.*

1. *U. inflata* : floating ; scape many flowered ; radical leaves verticillate, inflated, pinnatifid at their extremities ; lower lip of the corolla 3-lobed ; spur deeply emarginate.

HAB. Ponds. Aug. 4. *Rad. leaves spongy ; scape 5—8-fl. ; cor. large, yellow.*

2. *U. vulgaris* : floating ; stems submerged, dichotomous ; leaves many-parted, vesiculose ; scape 5—9-flowered ; upper lip of the corolla entire, broad-ovate ; spur conical, incurved.

HAB. In ponds of deep water. Aug. 4. *Stems 1—3 ft. ; leaves dichot. ; fl. large, yellow ; lower lip entire ; spur entire.*

3. *U. minor* : spur carinate ; upper lip emarginate ; palate equal : throat open ; leaves 3-parted, dichotomous.

HAB. Swamps and ditches. Aug. 24. *Stems decumbent ; lower lip of the corol. obovate.*

4. *U. setacea* : scape filiform rooting, 2—3-flowered ; upper lip of the corolla ovate ; lower distinctly 3-lobed ; spur sub-conical, shorter than the lower lip.

HAB. Overflowed swamps. June. 24. *Scap. 4—6 in., rooting in the mud ; flowers mostly two, very small ; spur rather obtuse.*

5. *U. gibba* : floating ; scape generally 2-flowered ; spur shorter than the lower lip of the corolla, obtuse, gibbous in the middle.

HAB. In ponds. July. 24. *Roots dichot., with few utric. ; scape 2—3 in. ; lips of the corol. roundish.*

6. *U. cornuta* : scape rooting, erect, rigid ; flowers 2—3, subsessile ; inferior lip of the corolla very wide, 3-lobed ; spur very acute, porrected.

HAB. On wet calcareous rocks. Aug.—Sept. 24. *Scape 1 ft., rooting in the mud, bracteolate ; fl. approx. large ; palate very prominent.*

7. *U. striata* : floating ; scape 2—3-flowered ; upper lip of the corolla ovate-round, sub-emarginate, waved on the margin ; lower lip 3-lobed, reflexed at the sides ; spur straight, obtuse, shorter than the lower lip.

HAB. In swamps. June. 24. *Stems with few submerged branches ; cor. yellow, much expanded, striate with red.*

8. *U. purpurea* : scapes axillary, generally 1-flowered ; involucre 0 ; lower lip of the corolla 3-lobed ; lateral lobes cucullate on the under side ; spur compressed, half as long as the corolla.

HAB. Ponds on mountains. Aug. 24. *Stems very long ; scapes often by pairs ; corolla purple !*

16. LYCOPUS. Water Horehound. *Labiatae.*

1. *L. europeus* β . *angustifolius* : smooth ; stem acutely quadrangular ; leaves narrow-lanceolate, with large acute teeth ; lower ones somewhat pinnatifid ; segments of the calyx acuminate, terminating in short spines.

HAB. Wet meadows and ditches. Aug. ☉. *Root creeping ; stem 1—2 ft., much branched ; leav. puncticul. ; fl. verticill. crowded, white.*

2. *L. virginicus* : leaves broad-lanceolate, serrate, nar-

row and entire at the base ; calyx shorter than the seed, spineless.

HAB. Shady, wet places. Aug. 24. *Stem 1—1½ ft. ; nearly simple, with obtuse angles ; leaves coarsely serrate, purplish beneath.*

3. *L. uniflorus* : plant small ; root tuberous ; stem simple ; leaves oval, obtuse, obsoletely toothed ; axils 1-flowered.

HAB. ——— Aug. 24. *Root tuberous ; stolans leafy ; stem 2—3 in. ; leaves petiolate.*

17. CUNILA. *Labiatae.*

C. mariana : leaves ovate, sessile, serrate ; corymbs axillary and terminal ; dichotomous.

HAB. On hills. Aug.—Sept. 24 *Leav. oppos., punctate ; cor. pink : Stam. exserted.*

18. HEDEOMA. Wild Pennyroyal. *Labiatae.*

H. pulegioides : leaves oblong, remotely serrate : peduncles axillary, numerous.

HAB. Dry hills and woods. July—Aug. ☉. *Plant aromatic ; fl. subverticillate, pale blue.*

19 MONARDA.

* *Calyx nearly equal.*

1. *M. didyma* : leaves ovate, acuminate, subcordate, somewhat hairy ; flowers in simple or proliferous heads ; exterior bracts large, coloured, lanceolate.

HAB. River banks. July—Aug. 24. *Stem quadrang. somewhat pubescent ; flowers large, scarlet.*

β. *angustifolia* : leaves ovate-lanceolate, acuminate, and with the stem, pubescent.

HAB. Boggy woods. July. 24. *Stem more slender ; heads rarely proliferous ; leaves often attenuate at the base.*

2. *M. oblongata* : pubescent ; heads simple ; exterior bracts ovate ; calyx short, with the throat bearded, teeth divaricate ; stem obtuse-angled, hairy above ; leaves oblong-lanceolate, rounded at the base.

HAB. Rocky situations. July. 24. *Stem 2—3 ft. much branched ; flowers flesh-colour ; bracts coloured.*

3. *M. clinopodia* : smooth ; heads small, simple, terminal ; exterior bracts broad-ovate, acute, entire, almost smooth ; calyx short, ciliate ; corolla pubes-

cent, slender; leaves ovate-oblong, acuminate, serrate, a little hairy; stem obtuse-angled, smooth.
HAB. Dry gravelly soil. July—Sept. 24. *Fl. yellow, with purple specks.*

4. *M. fistulosa*: nearly smooth; heads simple or proli-ferous, leafy; exterior bracts oblong, acute, glabrous; calyx long, bearded; corolla hirsute; leaves ovate, acuminate, serrate; petioles long, ciliate; stem smooth, obtuse-angled.

HAB. Among rocks, on river banks. Aug. 24. *Stem 2 ft., branched; flowers small, in dense heads, purplish, sometimes proliferous.*

5. *M. punctata*: somewhat smooth; flowers verticillate; bracts lanceolate, coloured, longer than the whorl; leaves lanceolate-oblong, remotely serrate; stem obtuse-angled, white, downy.

HAB. In sandy fields. Sept. 24. ♂. *Stem branched, 2—3 ft.; leaves punctate; fl. yellow, dotted with brown.*

* * *Calyx bilabiate.*

6. *M. hirsuta*: whole plant very hairy; flowers small, verticillate; bracts attenuated into awns; upper teeth of the calyx very short, the others setiform; leaves ovate, on long petioles, serrate.

HAB. On mountains. August. 24. *Much branched, and almost woolly; fl. pale blue, spotted with purple; upper lip very short.*

20. SALVIA.

1. *S. urticifolia*: viscous and villous; leaves ovate-oblong, toothed, narrowed into a petiole at the base; calyx 3-cleft; the upper division 3-toothed.

HAB. On mountains. June. 24. *Leaves punctate beneath; spikes naked; whorls remote; fl. blue.*

2. *S. lyrata*: radical leaves lyrate-sinuate; stem nearly leafless, retrorsely hairy; upper lip of the corolla very short.

HAB. Fields and borders of woods. June. 24. *Stem a foot high, very hairy; whorls about 6-fl.; cor. blue.*

3. *S. Claytoni*: leaves cordate-ovate, sinuate, toothed, rugose; teeth of the upper lip of the calyx connivent.

HAB.—June—Oct. ♂ and ♀. *Fl. violet.*

21. COLLINSONIA. Horse-weed. *Labiatae*.

C. canadensis: leaves broad-cordate, ovate, glabrous; teeth of the calyx short, subulate; panicle terminal, compound.

HAB. Among rocks, in rich soil. Aug. 24. *Smooth; leaves on long or short foot-stalks; fl. dull yellow.*

22. CIRCÆA. Enchanter's nightshade. *Onagrea*.

1. *C. lutetiana* β. *canadensis*: stem erect; leaves ovate, remotely toothed, opaque, nearly smooth.

HAB. Shady woods. July—Aug. 24. *Stem 1—2 feet high, simple; fl. in racemes, pedicellate, reddish-white; fruit hispid.*

2. *C. alpina*: stem branched, very smooth, often procumbent; leaves broad-cordate, membranaceous, acutely toothed, shining.

HAB. On barks of trees and wet mossy rocks. Aug. 24. *Very smooth, 6—8 in high; leaves very broad, sub-diaphanous; fruit pubescent.*

23. LEMNA. Duck's-meat. *Naiades*.

1. *L. trisulca*: fronds thin, elliptical-lanceolate, caudate at one extremity, at the other serrate,; roots solitary.

HAB. Pure stagnant waters. ☉. *Fronds laterally proliferous, and appearing cruciate; root a solitary fibre, caiptrate at the extremity.*

2. *L. minor*: fronds nearly ovate, compressed; roots solitary.

HAB. Stagnant waters. ☉. *Fronds a line or a line and a half long, succulent, aggregated.*

3. *L. gibba*: fronds obovate, nearly plane above, hemispherical beneath; roots solitary.

HAB. Stagnant waters. ☉. *Fronds as large as the preceding, gibbous, pellucid and reticulated beneath.*

4. *L. polyrrhiza*: fronds obovate-roundish, compressed; roots numerous, fasciculate.

HAB. On stagnant waters, often with No. 2. ☉. *3—4 lines long, rarely proliferous.*

24. CRYPTA. *Portulacæ*.

C. minima.

HAB. Borders of ponds, and banks of rivers. ☉? Aug. *minute, Prostrate and creeping, with the branches assurgent; leaves oppos. cuneate; fl. minute, axill.*

TRIANDRIA.

MONOGYNIA.

* *Flowers superior.*† *Complete.*

25. FEDIA. *Cal.* 1-leaved, 3—6-toothed. *Cor.* monopetalous, equally 5-cleft. *Caps.* crowned with the persistent calyx, 3-celled, only one of the cells usually fertile.

†† *Incomplete.*

26. IRIS. *Cor.* 6-parted; 3 of the segments reflexed, the others erect or connivent. *Style* short, or 0. *Stig.* 3, petaloid, covering the stamens. *Caps.* 3-celled, many-seeded.
27. LACHNANTHES. *Cal.* superior, petaloid, externally hirsute, deeply 6-parted, nearly equal. *Style* declining; *stig.* minutely 3-lobed. *Caps.* globose, 3-celled; cells 3—6-seeded.

** *Flowers inferior.*† *Complete.*

28. COMMELINA. *Cal.* 3-leaved. *Cor.* 3-petalled. *Stam.* 6; 3—4 sterile, and furnished with cruciform glands. *Caps.* 3-celled, 3-valved, one of the valves often abortive.
29. XYRIS. *Fl.* in a roundish or oblong head. *Cal.* glumaceous, cartilaginous, 3-valved. *Cor.* 3-petalled, equal. *Stig.* 3-cleft. *Caps.* 1-celled, 3-valved.

†† *Incomplete.*

30. SCHOLLERA. *Spath* 1-flowered, *Anth.* of 2 forms. *Cor.* tube very long; limb deeply 6-parted. *Caps.* 1-celled.
31. HETERANTHERA. *Cal.* a spath. *Cor.* tube long and slender; border 6-parted, equal. *Anth.* of 2 forms.

Caps. 3-celled, many-seeded, opening at the angles ;
dissep. contrary.

32. *SISYRINCHIUM*. *Spath.* 2-leaved. *Cor.* 6-petalled, flat, equal. *Stam.* cohering below. *Stig.* 3-cleft. *Caps.* 3-celled.

* * * *Flowers glumaceous.*

33. *KYLLINGIA*. *Fl.* distinct, disposed in a roundish, sessile, subimbricated spike. *Cal.* 2-valved, 1-flowered. *Cor.* 2-valved, longer than the calyx.
34. *SCIRPUS*. *Glum.* 1-valved, 1-flowered, imbricated on all sides. *Cor.* 0.
35. *SCHŒNUS*. *Glum.* fascicled into a spike, paleaceous ; the inferior ones empty. *Cor.* 0. *Style* deciduous. *Seed* 1, (mostly naked at the base.)
36. *RHYNCHOSPORA*. *Glum.* fascicled into a spike ; the inferior ones empty. *Cor.* 0. *Seed* 1, crowned with the persistent style ; base surrounded with bristles.
37. *MARISCUS*. *Fl.* distinct, in a somewhat imbricated spike. *Cal.* 2-valved, unequal, 3-flowered. *Cor.* 1-valved. *Style* 3-cleft. *Seed* triquetrous.
38. *DULICHIMUM*. *Spikes* somewhat racemose, axillary ; *spikelets* linear-lanceolate, rather compressed. *Glum.* distichous, sheathing. *Cor.* 0. *Style* very long, bifid ; base persistent. *Seed* with bristles at the base.
39. *CYPERUS*. *Spikelets* compressed, distinct. *Glum.* imbricated in two rows. *Cor.* 0. *Style* deciduous. *Seed* 1. naked.
40. *ERIOPHORUM*. *Glum.* 1-valved, imbricated on all sides into a spike. *Cor.* 0. *Seed* surrounded with long dense wool.
41. *FUIRENA*. *Glum.* awned, imbricated on all sides into a spike. *Cor.* 3-valved, petaloid ; valves cordate, awned, unguiculate.
42. *CENCHRUS*. *Involuc.* laciniate, echinate, including about 2 spikelets. *Cal.* 2-valved, 2-flowered ; the inferior fl. sterile, the other perfect. *Cor.* awnless. *Style* 2-cleft.
43. *SPARTINA*. *Fl.* in unilateral spikes, imbricated in 2 rows. *Cal.* 2-valved, compressed, unequal. *Cor.* 2-valved, awnless, unequal. *Nect.* collateral.

44. ORYZOPSIS. *Cal.* 1-flowered, 2-valved; valves membranaceous, nearly equal, loose, obovate, awnless. *Cor.* 2-valved, coriaceous, cylindrical-ovate, hairy at the base; the inferior valve awned at tip. *Nect.* linear, elongated.

DIGYNIA.

A. Flowers all perfect.

† *Spikelets 1-flowered.*

* *Cal.* 0.

15. LEERSIA. *Cal.* 0. *Cor.* 2-valved, closed; valves compressed, boat-shaped. *Nect.* obovate, entire, collateral.

* * *Cal.* 2-valved.

a. Cor. without abortive rudiments at the base.

1. *Glumes and corolla of dissimilar texture; the inferior valve involving the superior.*

α. Cor. unarmed.

16. PASPALUM. *Fl.* in unilateral spikes. *Cal.* 2-valved, membranaceous, equal, nearly orbicular. *Cor.* cartilaginous, of the size and form of the calyx. *Stig.* plumose, coloured. *Nect.* collateral.

17. MILIUM. *Cal.* 2-valved, herbaceous. *Cor.* 2-valved, coriaceous, oblong, concave, shorter than the calyx, awnless. *Seed* 2-horned. *Nect.* collateral.

β. Cor. armed or bristled at the tip.

18. PIPTATHERUM. *Cal.* membranaceous, longer than the corolla. *Cor.* cartilaginous, elliptical; inferior valve awned at the tip. *Nect.* ovate, entire. *Seed* coated.

19. STIPA. *Cal.* 2-valved, membranaceous. *Cor.* 2-valved, shorter than the calyx, coriaceous, involute, subcylindric; awn terminal, contorted near the base. *Seed* coated.

50. ARISTIDA. *Cal.* 2-valved, membranaceous, unequal. *Cor.* 2-valved, pedicellate, subcylindric; in-

ferior valve coriaceous, involute, 3-awned at the tip ; superior valve very minute, or obsolete. *Nect.* collateral.

2. *Glumes and corolla of nearly similar texture, often carinate.*

α. Panicle more or less spreading.

51. MUHLENBERGIA. *Cal.* very minute, 2-valved, truncate, unequal. *Cor.* 2-valved, hairy at the base ; inferior valve terminating in a slender bristle.
52. TRICHODIUM. *Cal.* 2-valved ; valves nearly equal, serrulate on the keel. *Cor.* 1-valved, smaller than the calyx. *Stig.* nearly sessile.
53. AGROSTIS. *Cal.* 2-valved, 1-flowered, compressed, herbaceous. *Cor.* 2-valved, membranaceous, generally larger than the calyx, often hairy at the base. *Nect.* collateral. *Seed* coated.
54. CINNA. *Cal.* 2-valved, compressed, nearly equal. *Cor.* linear, compressed, shortly stipitate, naked at the base ; inferior valve enclosing the superior, with a short awn near the summit.
55. POLYPOGON. *Cal.* 2-valved, 1-flowered ; valves nearly equal, terminating in a bristle. *Cor.* 2-valved, shorter than the calyx ; the inferior valve terminating in a bristle.
56. TRICHOCHLOA. *Cal.* 2-valved, 1-flowered ; glumes very minute. *Cor.* much larger than the calyx. 2-valved, naked at the base ; inferior valve convolute at the base, terminating in a long awn not articulated.
57. ARUNDO. *Cal.* 2-valved, unequal, membranaceous, surrounded with hair at the base ; inferior valve mucronate or slightly awned ; superior valve sometimes with a pencil-form rudiment at the base.

β. Panicle more or less contracted into a spike.

58. PSAMMA. *Cal.* 2-valved, awnless. *Cor.* shorter than the calyx, surrounded with hairs at the base. *Nect.* linear-lanceolate, longer than the seed. *Style* 3-parted ; *stig.* 3.
59. CRYPSIS. *Cal.* valved, membranaceous, carinate. *Cor.* longer than the calyx, which it resembles in texture and form. *Stam.* 2—3. *Nect.* 0.

60. ALOPECURUS. *Cal.* 2-valved, equal; *glum.* generally connate at the base. *Cor.* 1-valved, utriculate, cleft on one side, awned below the middle. *Styles* often connate.

61. PHLEUM. *Cal.* 2-valved, much longer than the corolla; glumes equal, boat shaped, rostrate or mucronate. *Cor.* 2-valved, included in the calyx, awnless, truncate.

C. *Cor.* with 1 or 2 abortive rudiments of florets at the base.

1. *Glumes and corolla of dissimilar texture.*

62. CYNODON. *Spikes* digitate and fascicled. *Fl.* unilateral, in a simple series. *Cal.* 2-leaved; *glum.* nearly equal, spreading, acute. *Cor.* 2-valved; sup. valve very narrow, surrounded by the inferior one. *Rudiment* minute, pedicellate. *Nect.* collateral.

63. GYMNOPOGON. *Cal.* 2-valved, carinate, nearly equal, longer than the flower; valves of the *cor.* nearly equal; the inferior with a straight bristle a little below the tip. *Rudiment* aristiform.

2. *Glumes and corolla of nearly similar texture.*

64. PHALARIS. *Cal.* 1-flowered, 2-valved, nearly equal, membranaceous, gibbous on the back, carinate. *Cor.* 2-valved, coriaceous, hairy at the base, shorter than the calyx. *Rudiments* opposite, sessile, resembling valves. *Nect.* collateral.

65. ANTHOXANTHUM. *Cal.* 2-valved, 1-flowered. *Cor.* 2-valved, with 2 abortive, 1-valved rudiments at the base; one of them awned from near the base, the other from near the tip. *Stam.* 2.

66. BRACHYELYTRUM. *Cal.* very minute; inferior glume scarcely perceptible. *Cor.* with the inferior valve terminated by a long bristle; superior valve with a clavate rudiment at the base.

†† *Spikelets many-flowered.*

* *Florets all perfect.*

a. *Flowers paniced.*

1. *Corolla unarmed.*

67. PHRAGMITES. *Cal.* 5—7-flowered. *Florets* on villose pedicels, except the lowest, which is sessile and naked at the base; inferior valve elongated, acuminate and involute; superior valve somewhat conduplicate.
68. GLYCERIA. *Spikelets* terete, elongated. *Cal.* many-flowered, shorter than the florets; inferior valve of the corolla herbaceo-membranaceous; superior valve somewhat conduplicate. *Nect.* collateral, connate. *Stig.* decomposed.
69. UNIOLA. *Spikelets* compressed, ancipital, many-flowered. *Cal.* 2-valved, shorter than the florets. *Cor.* 2-valved, awnless; inferior valve boat-shaped; superior valve smaller, concave on the back. *Nect.* collateral, emarginate.
70. BRIZA. *Spikelets* cordate-ovate, many-flowered. *Cal.* paleaceous, shorter than the distichous florets. *Cor.* ventricose; inferior valve cordate; superior nearly orbicular, very short.
71. POA. *Spikelets* oblong or linear, compressed, many-flowered. *Cal.* shorter than the florets. *Cor.* herbaceous, awnless, often arachnoid at the base; inferior valve scarious on the margin.

2. *Corolla more or less setigerous or mucronate.**α. Seed free.*

72. KÆLERIA. *Cal.* 2—4-flowered, shorter than the florets. Inferior valve of the *corolla* mucronate, or with a short bristle a little below the tip.
73. URALEPIS. *Cal.* 2—3-flowered, much shorter than the florets, which are stipitate and distinct. *Cor.* 2-valved; valves very unequal, distinctly villose on the margin; the inferior tricuspidate; the central cusp produced into a short bristle; superior valve concave on the back, and incurved. *Seed* gibbous, coated.
74. TRICUSPIS. *Spikelets* terete, tumid, many-flowered. *Calyx* 2-valved, carinate, shorter than the florets. Inferior valve of the *Cor.* tricuspidate by the projecting carina and margins; base and sides villous; superior valve emarginate. *Nect.* obtuse, entire.

β. Seed adnate.

75. **FESTUCA.** *Spikelets* often more or less terete, at length compressed, many-flowered. *Cal.* unequal, carinate, shorter than the florets. *Cor.* somewhat terete; superior valve acute, mucronate, or with a short bristle at the tip; superior valve bidentate.
76. **CERATOCLOA.** *Spikelets* lanceolate, subancipital, many-flowered. *Cal.* shorter than the imbricated florets. Inferior valve of the corolla compressed, mucronate below the tip; superior valve somewhat conduplicate. *Style* 2—3-parted.
77. **DIARRHENA.** *Cal.* 2-valved, very unequal, 2—5-flowered, rigid; glumes acuminate, mucronate. *Cor.* cartilaginous; inferior valve entire, broader; superior valve much shorter, emarginate. *Seed* coated, as long as the superior valve of the corolla. *Nect.* ovate, ciliate.
78. **DACTYLIS.** *Spikelets* aggregated in an unilateral head, many-flowered. *Cal.* shorter than the florets; one of the glumes larger, carinate and pointed. Inferior valve of the *cor.* carinate, emarginate, mucronate; superior valve somewhat conduplicate.
3. *Corolla more or less bifid, armed between the divisions, a little below the tip.*
79. **DANTHONIA.** *Cal.* 2—5-flowered, longer than the florets; glumes cuspidate. *Cor.* bearded at the base; inferior valve 2-toothed, with a twisted awn between the teeth; superior valve obtuse, entire.
80. **TRisetum.** *Cal.* 3—5-flowered, membranaceous, as long as the florets. Inferior valve of the corolla with 2 bristle-form teeth at the tip, awned below the division of the teeth.
81. **BROMUS.** *Spikelets* oblong, distichous, many-flowered. *Cal.* shorter than the florets. Inferior valve of the *corolla* bifid, with a bristle between the teeth a little below the tip; superior valve subconduplicate, ciliate.
4. *Inferior valve of the corolla awned on the back.*
82. **ARRHENATHERUM.** *Cal.* membranaceous, 2-flowered, rather shorter than the florets. *Inferior*

floret antheriferous ; inferior valve 2-cleft, awned below the middle. *Superior floret* perfect ; inferior valve cleft, unarmed, or with a short awn a little below the tip.

83. AVENA. *Cal.* membranaceous, many-flowered, generally longer than the florets. *Cor.* mostly bearded at the base ; inferior valve bilacinate, with a twisted awn on the back. *Seed* coated.
84. AIRA. *Cal.* 2—3-flowered, longer than the florets. Inferior valve of the *Cor.* eroded or many-toothed, awned on the back below the middle.

b. Flowers spiked.

1. *Calyx* 1-valved.

85. LOLIUM. *Spikelets* sessile on a rachis, many-flowered. *Calyx* of 1 glume. Inferior valve of the *cor.* herbaceo-membranaceous, mucronate, or with a short bristle at the tip.

2. *Calyx* 2-valved.

86. ELEUSINE. *Spikes* digitate, unilateral. *Cal.* membranaceous, 4—6-flowered ; glumes obtuse, unequal. *Cor.* membranaceous, unequal, unarmed ; inferior valve carinate, the superior concave on the back. *Seed* triangular, transversely rugose.
87. TRITICUM. *Spikelets* sessile on the teeth of the rachis, 3—4-flowered ; the 2 inferior florets opposite, fertile ; the upper ones often abortive. *Glum.* broad, boat-shaped, mucronate or armed. Inferior valve of the *cor.* terminating in a bristle ; superior valve subconduplicate.
88. AGROPYRON. *Spikelets* sessile on the teeth of the rachis, 3—9-flowered. *Glum.* lanceolate, carinate. Inferior valve of the *cor.* mucronate, or terminating in a subulate bristle.
89. SECALE. *Spikelets* sessile on the teeth of the rachis, 2—3-flowered ; the terminal floret abortive. *Cal.* 2-valved ; glumes subulate, opposite, shorter than the florets. Inferior valve of the *Cor.* terminating in a long bristle.
90. ELYMUS. *Spikelets* 2 or more at each joint of the rachis, 3—9-flowered. *Glum.* (involuerum) geminate,

subulate. Inferior valve of the *Cor.* entire, mucronate, or with a short bristle at the tip.

* * *Terminal florets abortive, or mere rudiments.*

91. MELICA. *Cal.* 2—4-flowered, loose, membranaceous. Florets as long as the glumes; one or more of the superior ones abortive and incomplete. *Cor.* unarmed, coriaceous-membranaceous. *Nect.* connate. *Seed* free.
92. ATHEROPOGON. *Spikes* in an unilateral raceme. *Cal.* 2-valved, membranaceous, 2-flowered; inferior glume setiform. *Perfect floret* 2-valved; inferior valve 3-toothed, or 3-bristled; superior valve bifid. *Abortive floret* pedicellate, 2-valved, 3-bristled.

B. *Flowers polygamous.*

† *Panicled.*

93. PANICUM. *Cal.* 2-valved, 2-flowered; the inferior glume often very small. *Florets* dissimilar; the lower one abortive or antheriferous, 1—2-valved; the inferior valve resembling in texture the glumes; superior membranaceous. *Perfect floret* with cartilaginous valves, unarmed.
94. HIEROCHLOA. *Cal.* 2-valved, 3-flowered; glumes scarious. *Lateral florets* antheriferous, triandrous. *Central floret* perfect, diandrous, (rarely triandrous.)
95. HOLCUS. *Cal.* 2-flowered; glumes membranaceous, somewhat boat-shaped, mucronate. *Florets* polygamous; the inferior perfect, sessile, unarmed; superior antheriferous or neuter, pedicellate, awned on the back near the middle.

†† *Spiked.*

* *With an involucre.*

96. SETARIA. *Spikelets* with an involucre of 2 or more bristles at the base. *Cal.* 2-flowered; glumes unequal, herbaceous. *Inferior floret* abortive, 1—2-valved, herbaceous. *Superior floret* perfect, with cartilaginous glumes.

* * *Without an involucre.*

97. DIGITARIA. *Spikes* linear, unilateral, generally

digitate or fasciculate. *Spikelets* by pairs, on short bifid pedicels. *Cal.* 1--2-valved, 2-flowered; inferior glume often inconspicuous. *Inferior floret* abortive, 1-valved, herbaceous. *Superior floret* perfect; valves coriaceous.

98. ANDROPOGON. *Spikelets* by pairs, polygamous; the inferior one *abortive*, (antheriferous or neuter,) on a bearded pedicel; *glum.* and *cor.* frequently very minute or wanting. Superior spikelet sessile, 1-flowered, *perfect*; glumes subcoriaceous; *cor.* 2-valved, shorter than the calyx, membranaceous; the inferior valve generally awned.
99. HORDEUM. *Spikelets* 3 at each joint of the *rachis*, 1-flowered, all perfect, or the lateral ones abortive. *Glum.* lateral, subulate.—*Perfect fl.*: *Cor.* 2-valved; inferior valve terminating in a bristle. *Seed* coated.

TRIGYNIA.

100. HOLOSTEUM. *Cal.* 5-leaved, coloured within. *Pet.* 5, 2-parted. *Caps.* 1-celled, bursting at the summit.
101. MOLLUGO. *Cal.* 5-leaved, coloured within. *Cor.* 0. *Capsule* 3-celled, 3-valved.
102. LECHEA. *Cal.* 3-leaved. *Pet.* 3. *Style* 0; *stig.* plumose. *Caps.* 3-celled, 3-valved, with as many interior valves opposite the others; cells 1-seeded.
103. PROSERPINACA. *Cal.* superior, 3-parted, persistent. *Cor.* 0. *Nut* bony, triquetrous, 3-celled.

TRIANDRIA.

MONOGYNIA.

25. FEDIA. *Valerianæ.*

F. radiata: leaves spathulate-oblong, nearly entire; fruit pubescent, somewhat 4-sided, naked at the top.
 HAB. In fields. May. ☉. *Stem* dichotomous, mostly erect; *fl.* blue, in fastigiate corymbs.

26. IRIS. Flag. Flower-de-lace. *Iridææ*.

1. *I. versicolor*: flowers beardless; stem terete, more or less flexuous; germen somewhat triangular; leaves ensiform.
 - α. *sulcata*: stem slightly compressed; interior petals longer than the stigmas; germen with the angles distinctly sulcate; the sides concave; capsule oblong, ventricose; angles indistinctly furrowed.
 - β. *communis*: stem erect, distinctly flexuous; leaves narrow-ensiform; interior petals a little shorter than the stigmas; angles of the germen not grooved when young; sides deeply concave; capsule cylindrical-oblong.
- HAB. In water. May—June. 24. *Root large, creeping; 2—3 ft. high; fl. blue, variegated with yell.*
2. *I. virginica*: flowers beardless; stem solid, terete; leaves very long and narrow; capsule elongated, prismatic, acute at each end.

HAB. Swamps. June. 24. *Stem 3—5 ft. high, slender; leav. half an in. broad; angles of the germ. deeply grooved.*
3. *I. lacustris*: flowers without a bearded crest; leaves ensiform, much longer than the 1-flowered scape; petals nearly equal, attenuated on the tube; capsule turbinate, 3-sided, margined; roots tuberous.

HAB. Gravelly shores of lakes. June. *Leaves 3-5 in. long; scape very short, compressed; pet. emarginate.*

27. LACHNANTHES. *Hæmodoracææ*.*L. tinctoria*.

HAB. Sandy swamps, in pine barrens. July. 24. *Root red, fibrous; stem 2-ft. high simple, woolly above; fl. corymbose, woolly, yellow within.*

28. COMMELINA. Day-flower. *Commelineææ*.

1. *C. angustifolia*: assurgent, slender, rather smooth; petals unequal, (one very minute;) leaves linear-lanceolate; bracts peduncled, short-cordate.

HAB. Borders of swamps. June. 24. *Leaves sheathing, ciliate at the throat; bracts subfalcate; fl. blue; fertile Stam. 2.*
2. *C. virginica*: petals nearly equal; stem erect, a little

pubescent; leaves long-lanceolate, subpetiolate; throat bearded.

HAB. Shady woods. July. 24. Stem 2 ft. high; leaves sometimes ovate-lanceolate; fertile stam. 3.

29. XYRIS. Yellow-eyed grass. *Juncæ*.

1. *X. caroliniana*: leaves linear, grass-like; scape ancipitous; head ovate, rather acute; scales round.

HAB. Swamps, and wet sandy places. July—Aug. 24. Scape erect simple, 1 ft. high; fl. yell. in a small scaly head.

2. *X. brevifolia*: leaves subulate-ensiform, short; head nearly globose; interior valves of the calyx shorter than the exterior, slightly notched.

HAB. Wet places. 24. Scape 12—18 in. high, compressed above; leaves twisted.

30. SCHOLLERA. *Narcissi*.

S. graminea.

HAB. In flowing water. July—Aug. 24. Floating; stem slender, dichotomous; leaves gramineous; fl. small, yellow, solitary; stam. 4, one of them abortive.

31. HETERANTHERA. *Narcissi*.

H. reniformis: leaves orbicular-reniform; spathe oblong, acuminate, 2—3-flowered.

HAB. Overflowed banks of rivers. July—Aug. 24. Stem partly floating; leaves petiolate; fl. white, evanescent.

32. SISYRINCHIUM. Blue-eyed grass. *Irideæ*.

1. *S. anceps*: scape ancipitous, winged, simple, nearly leafless; spathe about 4-flowered, unequal, shorter than the flowers; petals mucronate.

HAB. In wet meadows. May—June. 24. Stem slender; leaves grass-like; fl. small, blue; caps. globose.

2. *S. mucronatum*: scape simple, winged; scape coloured; one of the valves extended into a long marcescent point.

HAB. In sandy fields. June—July. Cespitose; spathe unequal, coloured; fl. blue.

33. KYLLINGIA. *Cyperoideæ*.

K. monocephala: stem filiform, 3-angled; head globose, sessile; involucre 3-leaved, very long.
 HAB.— 4. Root creeping; culm 3-12 in. high; head solitary.

34. SCIRPUS. Club-rush. *Cyperoideæ*.

* Seed surrounded with bristles at the base.

* Style articulated to the seed; base dilated and persistent.
 Seed often lenticular. (Spike solitary.)

1. *S. tenuis*: culm very slender, quadrangular; spike elliptical, acute at each end; glumes ovate, obtuse; stamens 3; style 3-cleft; seed rugose.

HAB. Wet places. July—Aug. 4. Culm naked, 8—12 in. high; head brown; bristles 2-3, sometimes wanting.

2. *S. glaucus*: culm many-angled, glaucous; spike ovate, acute; glumes ovate, obtuse, or emarginate; stamens 3; style 2-cleft.

HAB. Borders of salt marshes. July. 4. Culm slender, 1 ft. high; spike brownish; bristles 4.

3. *S. palustris*: culm terete, inflated; spike oblong-lanceolate; glumes somewhat obtuse; seed roundish, punctate and rugose; bristles scabrous.

HAB. Wet places. June. 4. Cespitose; culm 1-2 ft. high, sheathed at the base, leafless; seed crowned with a conical tubercle.

4. *S. capitatus*: stem terete, or somewhat compressed; spike ovate, obtuse; seed oval, compressed, smooth.

HAB. Wet places. July—Aug. 4. Cespitose; culm attenuated below the spike; spike often globose; bristles 6.

5. *S. acicularis*: culm setaceous, quadrangular; spike ovate, acute, 3—6-flowered; glumes somewhat obtuse; stamens 3; style bifid; seed obovate.

HAB. Border of ponds. June—July. 4. Culm almost hair-like; inf. glume empty, large; seed striate; bristles 4.

6. *S. pusillus*: culm compressed and a little angular; spike ovate, compressed; seed obovate; stamens 3; style 2—3-cleft.

HAB. In salt marshes. July—Aug. 4. *An inch high, growing in patches, like moss.*

7. *S. intermedius*: culms cespitose, quadrangular, sulcate; spike ovate-oblong, acute; glumes rather acute; stamens 3; style 2-cleft; seed broad-obovate, compressed; tubercle distinct.

HAB. Muddy banks of rivers. Sept. 4. *Ascending, 3—4 in. high; bristles 6; tubercle very minute.*

8. *S. planifolius*: culm triquetrous; radical leaves flat; nearly equalling the culm; spike terminal, oblong, compressed, shorter than the cuspidate bracts at the base.

HAB. Bogs and wet woods. May—June. 4. *Cespitose; leaves carinate; spike 6-fl. yellowish; inf. glumes very large, bracteiform.*

9. *S. subterminalis*: culm floating, sulcate, inflated, leafy below; spike solitary, somewhat terminal, lanceolate; style 2-cleft; seed triquetrous.

HAB. Ponds and rivulets. Aug. 4. *Whole plant, except the spike, under water; culm, when dry, much roughened by the contracting medulla; leaves channelled.*

10. *S. cespitosus*, β . *callosus*: culm cespitose, terete; spike ovate, few-flowered; glumes thickened and cartilaginous at the tips; the inferior ones bracteiform, as long as the spike; sheaths with rudiments of leaves.

HAB. On high mountains. July. 4. *A span high; culm with imbricated sheaths at the base; spikes yellowish; bristles 6.*

† † *Style filiform, not bearded, deciduous.*

11. *S. americanus*: culm nearly naked, triquetrous; sides concave; spikes lateral, (1—5,) ovate, conglomerate, sessile; glumes round-ovate, mucronate; seed triquetrous, acuminate.

HAB. In salt marshes, and on the banks of rivers. July—Aug. 4. *Culm 3-5 feet high, sometimes leafy at base.*

12. *S. debilis*: culms cespitose, deeply striate; spikes about 3, lateral, ovate, sessile; glumes ovate, obtuse, mucronate.

HAB. Borders of ponds. Aug.—Sept. 24. *A foot high; leaves few, subulate; spikes turgid; seed obovate; bristles 4—5.*

13. *S. lacustris*: culm terete, attenuated above, naked; panicle subterminal; spikes peduncled, ovate.

HAB. Ponds and river marshes. June. 24. *Culm 4—8 ft. high, sheathed at the base; spike subpanicle; glum. ovate, subpubescent; seed obovate.*

14. *S. acutus*: culm terete, (not attenuated,) spotted; peduncles numerous, sublateral; spikes oblong; glumes pubescent, mucronate.

HAB. Ponds and wet swamps. June—July. 24. *Culm 4 ft. high, with oblong brown spots; panicle proliferous; glum. dilated, carinate.*

15. *S. atrovirens*: culm triangular, leafy; cyme terminal, compound, proliferous; involucre 3-leaved; spikes conglomerate, ovate, acute; glumes ovate, mucronate, pubescent.

HAB. Wet meadows. June—July. 24. *Culm obtusely triang. 2 ft. high; involuc. long; spikes dark green, in heads of 10—12.*

16. *S. brunneus*: culm leafy, obtusely triangular; cyme decompound; involucre 3—4-leaved; spike round-ovate, clustered in about sixes; glumes ovate, obtuse.

HAB. In water. Aug.—Sept. 24. *Culm 2—3 ft. high; leaves long; spike brown; seed longer than the bristles.*

17. *S. macrostachyos*: culm triquetrous, leafy; corymb clustered; involucre about 3-leaved, very long; spikes oblong; glumes ovate, 3-cleft; the middle segment subulate and reflexed; style 3-cleft.

HAB. In salt marshes and ditches. July—Aug. 24. *Culm 3—4 ft. high; spikes 6—10, very large.*

- †† *Style filiform, deciduous. Bristles much longer than the seed.*

18. *S. Eriophorum*: culm obtusely triangular, leafy; panicle decompound, proliferous, nodding; spikes all pedunculate; bristles surrounding the seed exerted.

HAB. Swamps. Aug. 24. *Culm 4—5 ft. high; in-*

voluc. leafy, very long; panic. much divided; spikes small, ovate, woolly when ripe.

19. *S. lineatus*: culm triquetrous, leafy; panicle terminal and lateral, decompound, at length nodding; involucre 1—2-leaved; spikes ovate; glumes lanceolate, somewhat carinate; bristles longer than the seed.

HAB. Swamps. Aug. 24. Culm 2—3 ft. high; leaves subdistichous; pan. at first erect; bristles interwoven.

* * Seed naked at the base.

† Style simple at the base, not articulated to the seed, deciduous.

20. *S. subsquarrosus*: culm triquetrous, nearly naked, incurved; spikes 3, nearly terminal, ovate; glumes somewhat squarrose at the tip; involucre 2-leaved, very long, unequal.

HAB. Banks of rivers. Aug. ☉? Cespitose, about 2 in. high, almost setaceous; spikes turgid, crowded; glum. ovate, carinate.

21. *S. capillaris*: culm nearly naked, triquetrous, capillary; spikes ovate; 2-3 of them pedunculate, with an intermediate sessile one.

HAB. Sandy fields. Aug. ☉? A span high, cespitose; leaves setaceous, short, serrulate; spikes brownish, subumbellate.

22. *S. autumnalis*: culm compressed, ancipitous; umbel compound; involucre 2-leaved; spikes lanceolate, acute, somewhat 4-sided.

HAB. Boggy grounds. July—Oct. 24. Culm 8-12 in. high; leaves long; umbel loose; glumes ovate, mucronate, carinate.

†† Style bulbous and compressed at the base, ciliate on the margin.

23. *S. ferrugineus*: culm compressed, scabrous above; involucre unequally ciliate; spikes lanceolate, acute, nearly terete; glumes pubescent.

HAB. In wet or dry situations. Aug. Culm 2 in.—2 ft. high; leaves channelled, long; umbel mostly simple, with elongated rays; spikes brown.

24. *S. spadiceus*: culm compressed, nearly naked; umbel terminal; involucre rigid, 2-leaved, one of the leaves longer than the umbel; leaves subterete; spikes ovate-oblong, terete.

HAB. Salt marshes. Aug. 24. *Cespitose, tenacious; 2 ft. high; culm compressed above; spikes subcylind., brown.*

35. SCHOENUS. Bog-rush. *Cyperoidæ.*

- S. mariscoides*: culm terete, or a little sulcate, leafy; leaves channelled, semiterete; umbel terminal; fascicles of spikes 3 on each peduncle; seed naked, rounded at the base.

HAB. Bogs. July. 24. *Culm 2 ft. high; fascic. about 12-spiked; spikelets lanceolate; glum. ovate.*

36. RHYNCHOSPORA. *Cyperoidæ.*

1. *R. alba*: spikes in corymbose fascicles; culm triangular above; leaves setaceous; seed somewhat lenticular; bristles about 10.

HAB. Bogs and swamps. July—Sept. 24. *Fasc. axill. and terminal, bracteate; glum. white; seed substipitate.*

2. *R. fusca*: culm triquetrous; leaves linear, carinate; fascicles of spikes alternate, pedunculate; spikes ovate; glumes ovate, brown; seed ovate, with an acute black tubercle.

HAB. Bogs. 24. *Culm 2 ft. high; glum. mucronate, seed brown, rugose.*

3. *R. glomerata*: spikes in corymbose fascicles, very distant, by pairs; culm obtusely triangular; leaves flat; seed obovate-cuneiform, very smooth, as long as the tubercle.

HAB. Swamps and bogs. July—Sept. *Culm leafy; leav. carinate; spik. lat. and term.; glum. brown.*

4. *R. capillacea*: spikes 3—5, nearly terminal; culm triquetrous, somewhat leafy; leaves setaceous; seed stipitate, a little rugose.

HAB. Sandy swamps. July. 24. *A span high; glum. brown; bristles 6, longer than the seed.*

5. *R. sparsa*: culm triquetrous, leafy; corymbs axillary and terminal, compound, loose; peduncles capillary,

seed obovate, rugose, much longer than the tubercle.

HAB. Bogs. July 24. *Panicles spreading; the upper one larger; glum. brown; seed white.*

6. *R. cymosa*: culm triquetrous, leafy; cymes terminal and axillary; the terminal one much larger; seed round-ovate, compressed, transversely rugose; tubercle conical.

HAB. Swamps. July. 24. *A foot or 18 in. high; involucr. long, 2—3-leaved; tubercle white; bristles short.*

7. *R. laxa*: culm triquetrous; corymbs leafy, decom-pound, loose; spikes subulate; seed obovate, pointed with the long persistent style.

HAB. River swamps. July. 24. *Culm 3—6 ft. high; corymbs very large.*

37. MARISCUS. *Cyperoidæ.*

1. *M. retrofractus*: umbel simple; rays long; spikes obovate, retrorsely imbricate; spikelets subulate, at length bent backward; involucre 3-leaved.

HAB. Wet meadows. Aug.—Sept. 24. *Culm nearly naked, pubescent; umb. 6—8 rayed.*

2. *M. ovularis*: umbel simple; rays short; spikes globose; flowers spreading.

HAB. Boggy grounds. July—Aug. 24. *Root bulbous; culm 6—18 in. high; spikes 3—5-1; middle one sessile.*

3. *tenellus*: culm acutely triangular, slender; involucre 3—5-leaved; 3 of the leaves many times longer than the umbel.

HAB. Sea-coast. Aug. *A foot high; heads of 10—12 spikelets.*

38. DULICHIMUM. *Cyperoidæ.*

- D. spathaceum*: culm terete; leaves spreading in 3 directions; spikelets spreading.

HAB. Wet places. Aug.—Sept. 24. *Culm very leafy, terete below; ochreæ cylind.; racemes axillary.*

39. CYPERUS. Cyprus-grass. *Cyperoidæ.*

1. *C. inflexus*: umbel 2—3-rayed, or conglomerate and simple; involucre 3-leaved, very long; spikelets.

collected into ovate heads, oblong, 8-flowered ; glumes squarrose at the tip.

HAB. Banks of rivers. Aug.—Sept. ♂ ? 2—3 in. high ; odorous ; heads many-fl. ; glum. striate, yellowish.

2. *C. flavescens* : spikes linear-lanceolate, in fascicles of 3—4 ; glumes obtuse ; style 2-cleft ; seed lenticular ; involucre 3-leaved, longer than the spikes.

HAB. Boggy grounds. Aug.—Sept. ♀. A span high ; spikelets 14—20-fl., yellowish.

3. *C. Nuttallii* : culm acutely triangular ; umbel radiate, or nearly sessile, loose ; rays short ; involucre 4-leaved ; 2 of the leaves very long ; spikelets linear-lanceolate, compressed, acute ; stamens 2 ; style 2-cleft ; seed oblong, obtuse, compressed.

HAB. Borders of salt-marshes. Aug.—Sept. ♀. Cespitose, 5—12 in. high ; spik. very acute ; glum. green and brown ; seed smooth.

4. *C. diandrus* : culm slender, obtusely triangular ; umbel sessile, or 1—2-rayed ; involucre 3-leaved ; 2 of the leaves much longer than the umbel ; spikelets lanceolate-oblong, much compressed, many-flowered (14—16 ;) glumes margined, rather acute, keeled ; stamens 2 ; style 2-cleft ; seed oval, compressed.

HAB. Salt marshes. Sept. ♀. Culm weak, not cespitose ; glum. much compressed, with a brown margin.

5. *C. dentatus* : umbel compound, (6—10 rayed ;) involucre 3-leaved, longer than the umbel ; spikelets 3 on each ray, alternate, ovate, compressed, 8-flowered ; glumes acute, nervose, spreading at the points ; seed triquetrous.

HAB. Banks of rivers and sandy swamps. Sept. ♀. Root tub. ; spik. appearing dentate, brownish ; sometimes viviparous.

6. *C. erythrorhizos* : umbel decomposed ; involucre 3—6-leaved, very long ; spikes alternate, linear, horizontal, about 12-flowered, nearly terete ; style 3-cleft ; seed triquetrous.

HAB. Wet places. Aug.—Sept. ♀. Root fib. red ; partial umb. naked ; spik. at length terete.

7. *C. strigosus* : spikelets linear, compressed, acute ;

alternate ; glumes lanceolate, nervose ; umbel simple, or compound ; involucrum about 6-leaved. pubescent on the margin ; root globose.

HAB. Wet grounds. Aug.—Sept. 4. 1—2 ft. high ; umb. ochreate ; spik. 10—12 fl. yellowish.

8. *C. tenuis* : spikes lanceolate, acute, 10—17-flowered ; umbel simple ; involucrum 3—4-leaved, longer than the rays ; root tuberous.

HAB. Culm a span high, slender ; spik. yellow ; glum. nervose.

9. *C. phymatodes* : umbel simple or decomposed ; involucrum 3—9-leaved ; 3 of the leaves very long ; peduncles compressed ; spikelets distichous, linear, the lower one branched, about 15-flowered ; sides rather convex ; glumes oblong, obtuse ; radicles tuberous at the extremity.

HAB. Wet sandy places. Aug. 4. Root creeping ; leav. mostly rad. spreading, carinate ; umb. ochreate.

10. *C. compressus* : spikes digitate, somewhat by fours ; lanceolate ; glumes mucronate, broad, membranaceous.

HAB. Low meadows. 4. Culm 3—8 in. high, obtus. triang. ; spik. subsessile, 16—27 fl.

11. *C. virens* : culm acutely triangular ; umbels decomposed ; spikelets ovate-lanceolate, in compact heads ; involucrum very long.

HAB. Wet meadows and woods. 4. 1—2 ft. high ; spik. 16-fl., laterally compressed ; glum. acute.

12. *C. mariscoides* : umbel simple, or with 1—2 rays ; spikelets collected into globose heads, linear, 7—8-flowered ; glumes loose, obtuse.

HAB. In dry situations. July—Sept. 4. Root tub. ; culm 3—12 in. long ; head sometimes solitary ; spik. at first terete.

13. *C. odoratus* : spikelets corymbed, subulate, remote, distichous ; glumes somewhat distant ; smaller umbels spreading widely, about the length of their involucels.

HAB. Banks of rivers. +.

14. *C. flavicomis* : culm triquetrous ; umbel compound ; spikes linear-lanceolate, 7-flowered ; glumes obtuse ; involucrum very long, reflexed.

HAB. Boggy woods. 4. *Involucr.* 5-leav.; *spikelets distichous, compressed, yellowish; seed black.*

40. ERIOPHORUM. Cotton-grass. *Cyperoidæ.*

* *Spike solitary.*

1. *E. alpinum*: culm triquetrous, somewhat scabrous, naked; leaves very short, subulate,; spike oblong; woolly hairs crisped, few.

HAB. High mountains and bogs. July. 4. *Culm* 8—10 in. high, sheathed; *glum. oblong-lanc.*: hairs white, very long.

2. *E. vaginatum*: culm terete below, obtusely triangular above, smooth and rigid; sheaths inflated; spike oblong-ovate; glumes scarious; wool straight, dense.

HAB. Sphagnous swamps. July. 4. *Cespitose, a foot high; leaves numerous; glum. livid; wool white.*

* * *Spikes numerous.*

3. *E. polystachyon*: leaves flat, triquetrous at the extremity; culm nearly terete; spikes on scabrous peduncles, nodding.

HAB. Swamps. July. 4. *Culm* 1—2 ft. high, leafy; *leav. very long; spik. 9—12, subterm.*; wool white or reddish.

4. *E. virginicum*: culm nearly terete below, obtusely triangular above; leaves flat, very long; spikes clustered, erect, nearly sessile; involucre 2—3-leaved.

HAB. Swamps. July. *Culm* 2—4 ft. high; *spik. ovate, somewhat umbelled; wool reddish.*

β. *gracile*: culm very slender; leaves almost filiform.

HAB. Cedar swamps. Aug.

5. *E. angustifolium*: culm somewhat triangular; leaves channelled and triquetrous; peduncles very smooth.

HAB. Wet meadows. 4. *A foot or more high; leav. very narrow; spik. 3—5; wool white.*

41. FUIRENA. *Cyperoidæ.*

F. squarrosa: spikes clustered, (5—6) ovate; culm smooth; leaves ciliate; sheaths hairy; valves of the corolla cordate-ovate.

HAB. Bog-meadows. Aug. 24. *A foot and a half high, angul. ; leav. pubesc. ; spik. lateral and term. ; brist. 3—4.*

β. *pumila* : culm pubescent above ; leaves smooth ; throat of the sheaths hairy ; spikes 1—3, terminal.

HAB. Wet sandy places. Aug. *Culm 3—6 in. high ; spikes mostly 3 ; pet. ovate-lanceol. ; brist. 3—4.*

42. CENCHRUS. Burr-grass. *Gramineæ*.

C. echinatus : spike with the flowers approximated ; involucre subglobose, villose ; culm compressed.

HAB. Sandy arid soils. Aug. ☉. *Erect, or procumb., 1—2 ft. long ; involucre spiny, cartilaginous.*

β. *tribuloides* : spikes and margin of the sheaths white, pubescent.

HAB. Sea-coast and near salt-water. Aug. ☉. *A foot high ; leav. conduplicate ; rachis and involucre very white.*

43. SPARTINA. Marsh-grass. *Gramineæ*.

1. *S. cynosuroides* : spikes numerous, (10—40,) pedunculate, paniced, spreading ; leaves broad, flat, at length convolute ; calyx with a short awn on one of the glumes ; style 2-cleft at the summit.

HAB. Salt marshes. Aug. 4. *4—9 ft. high ; leaves 2—4 ft. long ; fl. closely imbricate ; style bifid.*

2. *S. juncea* : leaves distichous, convolute, spreading ; spikes few, 1—3, pedunculate ; peduncles smooth ; corolla rather obtuse ; styles 2.

HAB. Sea coast, and salt marshes. July—Aug. 4. *Root creeping ; culm 18 in. high, slender, rigid ; cal. very unequal ; anth. purple.*

3. *S. glabra* : leaves concave, erect ; spikes alternate, sessile, erect, appressed ; corolla nearly smooth on the keel ; style cleft about half way down.

HAB. Borders of salt-marshes. Aug.—Sept. 4. *Very smooth, 3—5 ft. high ; spikes 8—14 ; anth. yellow.*

44. ORYZOPSIS. *Gramineæ*.

O. asperifolia : culm nearly naked ; leaves erect.

rigid, pungent at the point ; flowers in a racemose panicle.

HAB. Mountain meadows. Apr.—May. 4. Culm 18 in. high ; rad. leaves long ; culm leaves few, very short ; pan. very simple ; cor. white, hairy ; seed large, white.

DIGYNIA.

45. LEERSIA. Rice-grass.

1. *L. virginica* : panicle simple ; the lower branches diffuse ; flowers appressed, monandrous, sparingly ciliate on the keel.

HAB. Wet woods and swamps. Aug. 4. Culm 2—4 ft. high, genicul. ; sheaths scabr. ; flowers clasping the pedicels, punctate.

2. *L. oryzoides* : panicle diffuse, sheathed at the base ; flowers triandrous, spreading ; keel of the glumes conspicuously ciliate.

HAB. Ditches and swamps. Aug.—Sept. 4. Culm 3—5 ft. high ; leav. and sheaths very scabr. ; fl. whitish.

46. PASPALUM.

1. *P. ciliatifolium* : culm decumbent ; leaves hairy and ciliate ; sheath hairy ; spikes 1—2, rather loose, indistinctly 3-rowed.

HAB. Sandy fields. Sept. 4. A foot and a half long, simple ; term. spik. on a long pedunc. ; fl. plano-convex, on bifid pedicels ; rach. flex.

2. *P. setaceum* : culm erect ; leaves and sheaths villose ; spike generally solitary ; flowers in 2 rows.

HAB. Sandy fields. Sept. 4. Culm 1—2 ft. high, simple ; rachis convex on the back.

3. *P. lave* : erect, very smooth ; leaves short ; spikes numerous, (3—6,) alternate ; flowers 2-rowed, smooth.

HAB. Banks of rivers. Sept.—Oct. 4. 2 ft. high ; leaves broad-linear ; spik. a little spreading ; pedicels 1-fl. subovate, large.

1. *P. stoloniferum* : spikes in elongated racemes, some

what verticillate, spreading; flowers serrulate-ciliate, transversely rugose; leaves short, subcordate; culm procumbent at base.

HAB. Cedar swamps. July—Aug. 4. *Stoloniferous*; *spik.* 3—50-*fl.*; *fl. alternate.*

47. MILIUM. Millet-grass.

1. *M. effusum*: panicle diffuse, compound; branches horizontal; glumes ovate, very obtuse; corolla awnless, smooth and shining; leaves broad-linear.

HAB. Woods. July. 4. 5—8 *ft. high, smooth*; *panic. alternate, loose.*

2. *M. amphicarpon*: leaves linear-lanceolate, hairy, ciliate; panicle simple, contracted, bearing perfect flowers; fertile flowers in solitary, elongated, radical scapes at length subterraneous.

HAB. Sandy swamps. Aug.—Sept. 4. *Cespitose*, 1—2 *ft. high, assurgent*; *panic. appress.*, *rad. fl. at length ventricose*; *glum. acuminate.*

3. *M. pungens*: culm erect; leaves lanceolate, very short, pungent, at length involute; panicle contracted; branches generally by pairs, 2-flowered; flowers awnless, ovate; corolla hairy.

HAB. Rocky hills. May. 4. 12—18 *in. high, rigid*; *culm leaves very short*; *panic. few-fl.*; *style 2-parted*; *nect. lanceolate.*

48. PIPTATHERUM.

- P. nigrum*: panicle simple; flowers racemose, ovate-lanceolate; corolla black, hairy; awn as long again as the valves.

HAB. Mountains and rocky places. Aug. 4. *Culm 2—3 ft. high, leafy*; *panic. few-fl. flexuous*; *nect. ovate-lanceolate.*

49. STIPA. Feather-grass.

- S. avenacea*: leaves setaceous; panicle spreading, somewhat secund; branches mostly by pairs, a little divided; calyx as long as the seed; awn naked.

HAB. Sandy woods. June. 4. 2-*ft. high*; *leaves mostly rad. narrow*; *cor. stipit. brownish*; *awn 2—3 in. long.*

50. ARISTIDA.

1. *A. dichotoma*: cespitose; culm dichotomous; flowers racemose-spiked; lateral awns very short; the intermediate one contorted.

HAB. Fields and dry hills. Sept. ☉. 8—12 in. high, slender; cor. 1-valved; lat. awns straight.

2. *A. stricta*: culm and leaves straight, erect; leaves pubescent; raceme long, somewhat spiked, crowded; awns twice as long as the corolla, spreading.

HAB. Sandy soils. ♀. Cespitose, 2—3 ft. high; leav. long, convolute at the extrem.; cor. hairy at base.

3. *A. purpuracens*: culm filiform, erect, simple; leaves very narrow, flat; flowers in a long spiked panicle; awns nearly equal, twice the length of the corolla, divaricate.

HAB. Sandy fields and woods. Sept.—Oct. ♀. 2 ft. high; leav. filiform at the ext.; panic. many-fl., purple.

51. MUHLENBERGIA.

M. diffusa: culm diffuse, (decumbent;) leaves linear-lanceolate; panicle branched, appressed; awns as long as the corolla.

HAB. Dry hills and fields. Aug.—Sept. ♀. Culm genic., slender; pan. lat. and term.; cal. scarcely apparent.

52. TRICHODIUM.

1. *T. laxiflorum*: culm erect; leaves setaceous, and with the sheaths somewhat scabrous; panicle diffuse, capillary, with trichotomous branches; calyx unequal.

HAB. Dry swamps and fields. May—June. ♀. A foot and a half high, filif.; pan. at length pyramidal, purplish.

2. *T. scabrum*: culm geniculate at the base, assurgent, branched; leaves linear-lanceolate, flat, striate, scabrous; sheaths mostly smooth; panicle verticillate and divaricate; calyx unequal; corolla ovate, acute, 3-nerved.

HAB. Dry woods. Aug.—Sept. ♀. 12—18 in. high;

leaves broad, pale green; panic. concealed at the base.

3. *T. elatum*: culm erect, firm; leaves narrow-linear, flat, scabrous; sheaths smooth; panicle verticillate, a little spreading; glumes nearly equal.

HAB. Sandy swamps. Aug. 4. *Cespitose, 3 ft. high, firm; panic. purp.; cor. shorter than the calyx.*

4. *T. montanum*: culm cespitose, erect; leaves involute, filiform, and as well as the sheaths, scabrous; panicle capillary, loose, a little spreading; glumes equal.

HAB. Mountains. July. 4. *8—12 in. high, filiform; panic. elongated, semiverticill., flex. hispid; glum. nerveless; cor. longer than the calyx.*

53. AGROSTIS. Bent-grass.

1. *A. stricta*: panicle elongated, straight; calyx equal: corolla smaller than the calyx; valves unequal, with an awn at the base of the inferior valve, longer than the flower.

HAB. Fields. June. *Culm erect, with black nodes; awn twice as long as the flower.*

2. *A. vulgaris*: branches of the panicle smoothish, at length divaricate; inferior valve of the corolla 3-nerved; stipule very short and truncate.

HAB. Meadows and pastures. June—Aug. 4. *Root creeping; culm 12—18 in. high; pan. capill.; fl. purp.*

3. *A. alba*: branches of the panicle hispid, spreading, loose; inferior valve of the corolla 5-nerved; stipule oblong.

HAB. Fields and pastures. June—Aug. 4. *Root creeping; culm assurgent, often sobolif.; panic. capillary.*

4. *A. lateriflora*: culm erect, branched above, soboliferous at the base; panicles lateral and terminal, contracted, dense; calyx acuminate; corolla shorter than the calyx, equal, pubescent at the base, awnless.

HAB. Swamps and wet meadows. Aug.—Sept. 4. *Root creeping; culm 2 ft. high, with swelling nodes; panicles spike-form.*

3. *filiformis*: panicles very slender; corolla nearly equalling the calyx.

HAB. Swamps and wet places. Sept.

5. *A. sobolifera*: culm erect, branched; panicle contracted, filiform, simple; branches appressed; corolla longer than the equal calyx, hairy at the base; valves equal, awnless, mucronate at the tip.

HAB. Rocky hills and woods. Aug.—Sept. 4. *Culm sobolif.*, sometimes *decumb.*, 2 ft. high; nodes not swelling.

6. *A. tenuiflora*: culm nearly simple, pubescent about the joints; branches (if any) appressed; stipules obsolete; panicle contracted, filiform; corolla longer than the calyx; inferior valve with an awn twice as long as the flower.

HAB. Rocky woods. July—Aug. 4. *Root creeping*; culm 3 ft. high; sheaths mostly pubescent.

7. *A. sylvatica*: culm erect, much branched, diffuse, smooth; stipules lacerate; panicle filiform; corolla longer than the calyx; awns three times as long as the flower.

HAB. Rocky situations. Aug. 4. *Root creeping*; culm 2—3 ft. high; sheaths open and smooth.

8. *A. compressa*: whole plant very smooth; culm erect, compressed, simple; panicle oblong, subcontracted, with capillary branches; calyx equal, shorter than the corolla, acute; corolla rather obtuse, smooth at the base.

HAB. Sandy swamps. Sept. 4. *Root creeping*; culm *sobolif.*; leav. linear, long, compress.; sheaths carinate; pan. purp.

9. *A. serotina*: culm filiform, much compressed; leaves very narrow, carinate, erect; panicle attenuate; calyx unequal, half as long as the awnless corolla.

HAB. Sandy swamps. Sept. 4. 12—18 in. high; leav. almost filif.; pan. slender, flex.

10. *A. juncea*: leaves straight and erect, convolutely setaceous; panicle oblong-pyramidal, verticillate; flowers awnless; calyx half the length of the corolla.

HAB. Barren sandy places. Oct. 4. *Culm* 1—2 ft. high, terete; fl. purp.; cal. unequal; nect. obsolete.

11. *A. virginica*: culms numerous, procumbent at the base, assurgent; leaves subdistichous, involute, rigid; panicles lateral and terminal, spike-form; the lateral ones concealed; calyx equal, about as long as the corolla.

HAB. Sandy soils. Sept.—Oct. ☉? *A foot high; leav. hairy at base; sheaths swelled; stip. 0; anth. purp.*

12. *A. longifolia*: panicle contracted, spiked, generally concealed; corolla much longer than the calyx, subequal, smooth and spotless, without awns; leaves very long, filiform and recurved at the apex.

HAB. Sandy hills and fields. Sept.—Oct. ♀. *Culm 2—4 ft. high; simple, terete; leaves 2 ft. long; pan. sometimes exerted; fl. compress.*

13. *A. clandestina*: panicle spiked, partly concealed; corolla unequal, much longer than the calyx, hairy and spotted, slightly awned; leaves very long.

HAB. Dry hills. Sept. ♀. *Culm 2 ft. high, terete; pan. often sooty; glum. carinate.*

54. CINNA.

C. arundinacea: panicle large, capillary, loose; leaves broad-linear; culm smooth.

HAB. Swamps and wet woods. Aug.—Sept. ♀. *Culm 2—5 ft. high; leav. pale green; fl. green.*

55. POLYPOGON.

P. racemosus: panicle dense, conglomerate, interrupted; bristles of the calyx scabrous; corolla unarmed, hairy at the base; culm branched.

HAB. Bog-meadows. Aug.—Sept. ♀. *Culm 3—4 ft. high, compress.; branch. appress.; leav. flat; pan. 2 in. long.*

56. TRICHOCHLOA.

T. capillaris: leaves convolute, filiform, smooth; panicle diffuse, capillary, very slender; pedicels longer than the awns; awns 3—4 times the length of the flower.

HAB. Sandy pine woods. Sept.—Oct. ♀. *Cespitose, 2 ft. high, slender; pan. long, purple, very slender.*

57. ARUNDO.

1. *A. canadensis*: panicle oblong, loose; glumes scabrous, pubescent, as long as the corolla; corolla awned on the back; hairs at the base equalling the valves; culm and leaves smooth.

HAB. Bog-meadows. Aug. 24. *Culm* 3—4 ft. high, mostly simple; *inf. sheaths* pubesc.; *pan.* purple.

2. *A. coarctata*: panicle somewhat spiked, conglomerate; calyx a little longer than the corolla, carinate; corolla longer than the pappus, awned a little below the tip.

HAB. Bog-meadows. July—Aug. 24. *Culm* 3—5 ft. high; *pan.* straight and erect, never spreading.

3. *A. brevipilis*: panicle diffuse, capillary; calyx unequal, shorter than the corolla, bearded at the base; corolla equal, awnless, hairy; pappus very short.

HAB. Sandy swamps. Sept. 24. *Culm* 3—4 ft. high, terete; *pan.* pyram. loose; *cal.* hairy at base.

58. PSAMMA.

P. arenaria: panicle spiked; calyx acute; corolla three times as long as the pappus; leaves involute.

HAB. Sea-coast. Aug. 24. *Roots* long, creeping; *culm* 2—3 ft. high, rigid; *pan.* cylind. white; *fl.* compress.

59. CRYPSIS.

C. virginica: spike oblong-cylindrical, thick and lobed; culm procumbent and geniculate; leaves at length involute, rigid, pungent.

HAB. Sandy fields. Aug.—Oct. *Culm* branched, spreading; *leav.* flat, divaric.; *spik.* lat. and term.

60. ALOPECURUS. Fox-tail grass.

1. *A. pratensis*: culm erect, smooth; spike cylindrical, obtuse, lobed; calyx ciliate, somewhat villose, connate below the middle; corolla as long as the calyx.

HAB. Fields. June—July. 24. *Culm* 2—4 ft. high; *leav.* flat; *spik.* $1\frac{1}{2}$ in. long; *awn* twice as long as the flower; *styl.* connate.

2. *A. geniculatus*: culm ascending, geniculate; spike

TRIANDRIA.—DIGYNIA.

cylindrical; glumes a little connate at the base, hairy on the back and margin; corolla truncate; styles free.

HAB. Wet meadows. June. 4. *Root creeping; culm 18 in. high, rooting below; awn as long again as the corolla.*

3. *aristulatus*: awn scarcely exerted.

HAB. Wet meadows. June.

61. PHLEUM. Cat's-tail grass.

P. pratense: spike cylindric, calyx mucronate-awned; keel ciliate; awn shorter than the calyx; culm erect.

HAB. Fields and pastures. June—Aug. 4. *Culm 2—3 ft. high; leav. glauc., smooth; anth. purp.*

62. CYNODON. Bermuda-grass.

C. dactylon: culm creeping; spikes digitate, (4—5,) spreading; keel of the calyx scabrous; leaves hairy on the margin and towards the base; sheaths hairy.

HAB. Sandy soils. Aug. 4. *Root long, creeping; culm stolonif.; leav. subdistich.; spik. slender.*

63. GYMNOPOGON.

G. racemosum.

HAB. Sandy fields. Aug. 4. *Culm 1—2 ft. high, assurgent, leafy; leav. ovate-lan., spreading, distich.; pan. large, pyram.; fl. appress., sess.*

64. PHALARIS. Canary-grass.

1. *P. americana*: panicle oblong, spiked; glumes boat-shaped, serrulate; corolla unequal; rudiments hairy.

HAB. Bog-meadows. July. 4. *Culm 2—5 ft. high, terete; leaves broad-linear; pan. a little spreading when old.*

2. *P. canariensis*: panicle subspiked, ovate; calyx boat-shaped, entire at the apex; rudiments smooth.

HAB. Pastures. July. ☉. *18 in. high; sheaths inflated.*

65. ANTHOXANTHUM. Sweet-scented vernal-grass.

A. odoratum: spike ovate-oblong; flowers pubescent, subpeduncled, shorter than their awns.

HAB. Meadows, dry woods, &c. May—Aug. 4.
A foot high; leav. pubesc.; pan. spiked; seed black.

66. BRACHYELYTRUM.

B. aristatum.

HAB. Rocky hills. June—July. 4. *Root creeping; culm erect, simp., 2—3 ft. high; pan. racemose; awns twice as long as the fl.*

67. PHRAGMITES. Reed-grass.

P. communis: calyx about 5-flowered; florets longer than the calyx.

HAB. Borders of ponds, and swamps. Aug. 4. *Culm 6—12 ft. high, thick; leav. 1—2 in. broad; pan. large nodding; fl. silky.*

68. GLYCERIA.

1. *G. fluitans*: panicles secund, slightly branched; spikelets linear, terete, appressed, 8—12-flowered; florets very obtuse, 7-nerved; leaves long, flat.

HAB. In water. June—July. 4. *Root creeping; culm 3—5 ft. high, compress., assurg.; pan. long, racemose.*

2. *G. acutiflora*: panicle simple, elongated, appressed; spikelets linear, terete, 4—12-flowered; florets attenuate, acute, indistinctly nerved; leaves short, erect.

HAB. Wet meadows. June. *Culm 2—4 ft. high, subcompress.; stip. elongat.; pan. long, concealed at the base.*

69. UNIOLA. Spike-grass.

1. *U. latifolia*: leaves broad and flat; panicle loose, nodding; spikelets all on long peduncles; florets somewhat falcate, monandrous; the lowest one abortive.

HAB. Mountains and rocky woods. Aug. 4. *Culm 4 ft. high; pan. very large; spik. an inch long, flat, ovate.*

2. *U. gracilis*: panicle elongated, racemose, appressed; spikelets 3-flowered; florets spreading, straight, monandrous; the lowest one abortive.

HAB. Sandy swamps. Aug. 4. *Culm 3—4 ft. high,*

very slender; panic. with solitary branches; spik. broad-cuneate; anth. and stig. dark purple.

3. *U. spicata*: panicle spiked, straight; leaves involute, distichous, spreading; spikelets 5—9-flowered; florets triandrous.

HAB. Salt-marshes, and on the sea-coast. Aug.—Sept. 24. *Root long, creeping; culm 12—18 in. high; spik. ovate, yellowish-green; nect. obovate, minute.*

70. BRIZA. Quaking-grass.

B. media: panicle erect; spikelets at length cordate, about 7-flowered; calyx smaller than the florets.

HAB. Meadows. May. 24. *Culm 18 in. high; stip. obtuse; panic. capill.; spik. tumid, purplish; cor. nerveless.*

71. POA. Meadow-grass.

1. *P. annua*: panicle subsecund, divaricate; spikelets ovate-oblong, 5-flowered; florets free; culm oblique, compressed; root fibrous.

HAB. Fields, pastures, &c. April—Aug. ☉. *Cespitose, 6—8 in. long; panic. rather crowded, at length spreading; cor. pubescent, 5-nerved.*

2. *P. fasciculata*: panicle expanding; branches straight, fasciculate, crowded; spikelets oblong, 3-flowered; florets free; calyx minute, unequal; culm oblique, terete; root fasciculate.

HAB. Salt-marshes. Aug. 24. *Culm 1—2 ft. high, firm; panic. at first appressed; spik. subracemose; cor. smooth.*

3. *P. dentata*: panicle loose, somewhat spreading; branches capillary, virgate; spikelets lanceolate, 5-flowered; calyx free; florets unequal; inferior glume obtuse, 3-nerved; inferior valve of the corolla 5-nerved, 5-toothed at the apex when old.

HAB. Shady swamps. June—July. 24. *Root creeping; culm 3 ft. high; leav. and spik. pale green; pan. at first nodding.*

4. *P. aquatica* β . *americana*: panicle erect, semi-verticillate, diffuse; branches flexuous, smooth; spikelets linear, 6—8-flowered; florets ovate, obtuse, free; leaves broad-linear, and as well as the sheaths, smooth.

- HAB. Wet meadows. Aug. 24. *Culm* 4—5, *thick, leafy*; *pan. very large, at first nodding*; *spik. purp.*
5. *P. maritima*: panicle branched, somewhat crowded; spikelets about 5-flowered, terete; florets rather obtuse, indistinctly 5-flowered; root creeping.
- HAB. Salt-marshes. June. 24. *A foot high*; *leav. involut.*; *pan. erect, somewhat flexuous*; *spik. linear, purplish*; *fl. woolly at base.*
6. *P. brevifolia*: panicle loose; branches in pairs, horizontal; calyx 3—4-flowered; corolla pubescent; leaves very short; stipules, acuminate.
- HAB. Mountains and woods. April. 4. *Culm* 2 ft. *high, erect, and obliq.*; *inf. leav. very short*; *spikelets loose*; *fl. distant.*
- 7 *P. pungens*: culm compressed; leaves very short, cuspidate; panicle somewhat simple, spreading; spikelets ovate, 3—4-flowered; florets webbed, rather obtuse, obscurely 5-toothed.
- HAB. Rocky situations. April. 24. *Culm* 18 in. *high, subancipit.*; *culm leaves about 2, erect*; *pan. semi-verticil., capill.*
8. *P. pratensis*: panicle diffuse; upper leaves much shorter than the smooth sheaths; florets acute, 5-nerved, webbed at the base; stipule short, truncate; root creeping.
- HAB. Meadows and pastures. May—July. 24. *Pan. pyramid.*; *spik. ovate*; *glum. unequal.*
9. *P. trivialis*: panicle equal, diffuse, spikelets oblong-ovate, about 3-flowered; florets webbed at the base, 5-nerved; culm sheaths roughish; stipule oblong; root creeping.
- HAB. Moist meadows. June—Aug. 24. *Culm* 2—3 ft. *high, stolonif.*; *pan. pyramidal*; *stipule elongated.*
10. *P. compressa*: panicle contracted, somewhat secund; spikelets oblong, 3—6-flowered; florets webbed; glumes nearly equal; culm oblique, compressed; root creeping.
- HAB. Fields and dry hills. June—July. 24. *Culm* a *foot high, assurgent*; *leav. glauc.*; *panicle sub-spiked.*
- β. *sylvestris*: panicle loose, spreading; spikelets 2—3-flowered; culm slender, nearly erect.
- HAB. In dry woods. July.

11. *P. serotina*: panicle elongated, diffuse, at length somewhat secund; spikelets ovate-lanceolate, 2-3-flowered; florets a little webbed at the base, yellow at the tip, obscurely 5-nerved; root creeping.
HAB. In wet meadows. June. 4. Culm 2-4 feet high; pan. appress. when young; cal. often 2 fl.; anth. yellow.
12. *P. nemoralis*: panicle attenuated, weak; branches flexuous; spikelets ovate, about 3-flowered; florets loose, slightly webbed, acute, obsoletely nerved; stipule almost wanting.
HAB. Rocky woods. July. 4. Pale green; pan. capillary; florets at length distant.
13. *P. nervata*: panicle equal, diffuse; branches weak, and at length pendulous; spikelets 5-flowered; florets free, conspicuously 7-nerved, obtuse.
HAB. In wet meadows and in ditches. June. 4. Culm 3-4 ft. high; pan. large, many-fl.; spik. ovate; fl. deciduous; stam. mostly 2.
14. *P. elongata*: panicle elongated, racemose; branches solitary, appressed; spikelets ovate, obtuse, tumid, 3-flowered; florets free; stipule almost wanting.
HAB. Wet meadows. June—July. 4. Culm 3 feet high, dark green; pan. nodding; fl. 5-nerved.
15. *P. obtusa*: panicle ovate; contracted; spikelets ovate, tumid, 5-7-flowered; florets free; glumes scarious; corolla ovate, smooth, obtuse; inferior valve indistinctly 7-nerved; leaves as long as the culm, and with the sheaths smooth.
HAB. Swamps. Aug.—Sept. 4. Culm. 3-4 ft. high, firm; leav. long, dark green; pan. dense, many-fl.; spik. large.
16. *P. canadensis*: panicle large, effuse; spikelets semi-verticillate, flexuous, at length pendulous; spikelets ovate, tumid, 5-8-flowered; florets free; inferior valve somewhat acute, 7-nerved; superior valve very obtuse; stamens 2.
HAB. Swamps. July—Aug. 4. Culm 3-4 ft. high; leav. long; pan. at first pyramidal, at length much spreading and pendulous.
17. *P. capillaris*: panicle very large, loose, expanding,

capillary ; spikelets 3-flowered, ovate, acute ; florets free ; culm branched at the base ; leaves hairy.

HAB. Sandy fields, and dry hills. Aug. ☉. *Culm* 12–18 in. high, branch. at base ; *stip.* bearded ; *pan.* pyramidal, branched, not hairy at the base.

18. *P. hirsuta* : culm erect, compressed, simple ; sheaths hairy ; panicle very large, capillary ; branches expanding, at length reflexed, bearded in the axils ; spikelets oblong, about 5-flowered ; corolla ciliate on the margin.

HAB. Sandy fields. July—Aug. ♀. *Culm* firm, straight ; *leav.* longer than the culm ; *fl.* purplish.

- β. *spectabilis* : spikelets linear, 10–15-flowered.

HAB. Sandy fields on the sea-shore. Taller than the preceding, *spik.* purp. $\frac{1}{2}$ in. long.

19. *P. pectinacea* : culm cespitose, oblique ; leaves hairy at the base ; panicle capillary, expanding, pyramidal, hairy in the axils ; spikelets linear, 5–9-flowered ; florets free, acute ; superior valve of the corolla persistent.

HAB. Sandy places—wet or dry. July—Aug. ☉. *Culm* 8–12 in. high, *genic.* or *decumb.* at the base ; *pan.* large ; *fl.* purplish.

20. *P. reptans* : dioecious ; culm branched, creeping ; panicle fascicled ; spikelets linear-lanceolate, 12–20-flowered ; florets acuminate.

HAB. Swamps and river banks. July—Aug. ☉. *Culm* a span long, slender ; *leav.* subulate ; *pan.* 1–2 in. long ; *glum.* very acute.

21. *Eragrostis* : panicle equal, spreading ; the lower branches hairy in the axils ; spikelets linear-lanceolate, 9–15-flowered ; florets obtuse ; root fibrous.

HAB. Sandy fields, July—Aug. ☉. *Culm* 18 in. high, *genic.* at base ; *spik.* large ; *lead-colour* ; *fl.* often verrucose on the keel.

72. KCLERIA.

1. *K. pennsylvanica* : leaves flat, and with the sheaths softly pubescent ; panicle oblong, slender, rather loose ; calyx 2-flowered ; glumes nearly equal ; the inferior oblong, obtuse and slightly mucronate ; superior valve of the corolla scabrous.

HAB. woods. May—June 4. *Culm erect, 2 ft. high, simple; fl. shining.*

2. *K. truncata*: leaves flat, smooth; panicle oblong, racemose; calyx 2-flowered, with a third abortive floret, unequal; inferior glume a little scabrous, obtuse; corolla glabrous.

HAB. Dry woods. June 24. *Culm 2 ft. high, slender; cal. very unequal; inf. glum. obliquely truncate.*

3. *major*: panicle large, a little spreading; leaves broad-linear, very long.

73. URALEPIS.

U. aristulata: lateral panicles concealed in the sheaths of the leaves; terminal ones partly exsert; calyx 3-flowered; bristle of the corolla as long as the lateral cusps.

HAB. Sandy sea-shore, and in fields. Aug. ☉. *Cespitose, procumb. at base; leaves subulate, pungent, hairy; fl. axill. and term., purple.*

74. TRICUSPIS.

T. seslerioides: panicle expanding and flexuous; spikelets all pedunculate, about 6-flowered, lanceolate; inferior valve of the corolla ovate, 5-toothed.

HAB. Sandy fields. Aug. 4. *Culm 4–5 ft. high, erect, smooth; pan. very large, purp.; glum. unequal, ovate, mucronate.*

75. FESTUCA. Fescue-grass.

1. *F. Myurus*: panicle slender, crowded, equal; spikelets about 4-flowered; florets subulate, awned, hairy, monandrous.

HAB. Sandy soils. June ☉. *Culm 6–8 in. high, genic. at base; leav. subulate; awn twice as long as the fl.*

2. *F. tenella*: panicle spiked, very simple, secund; spikelets mostly 9-flowered; bristles shorter than the subulate florets; culm filiform, angular above; leaves setaceous.

HAB. Sandy soils and on hills. June. ☉. *Culms numerous, 8–14 in. high, straight; sheaths pubescent; cal. decid.*

3. *F. duriuscula*: panicle secund, oblong, contracted; spikelets 5—6-flowered, nearly terete; florets terminated by short bristles; root fibrous.
HAB. Fields and pastures. June. 24. *Culm* 12—18 in. high; *leav.* narrow; *stam.* 3.
4. *F. rubra*: panicle secund, erect, spreading; spikelets somewhat terete; florets longer than the bristle at their tips; leaves pubescent above; root creeping.
HAB. Dry soils. June. 24. *Culm* a foot and a half high, erect, pubesc.; *leav.* setaceous, very long; *glum.* red after flowering.
5. *F. elatior*: panicle spreading, much branched, loose; spikelets ovate-lanceolate, 4—5-flowered; florets slightly armed; leaves flat; root creeping.
HAB. Wet meadows. June. 24. *Culm* 3—4 ft. high, terete, smooth; *stip.* very short; *pan.* large, nodding when old.
6. *F. pratensis*: panicle spreading, branched; spikelets linear, many-flowered, acute; leaves linear; root fibrous.
HAB. Meadows and fields. June—July. 24. *Culm* 1—2 ft. high, erect, smooth; *pan.* subsecund, nearly simple; *spic.* 7—8-fl.; *fl.* not mucronate.
7. *F. nutans*: panicle diffuse, at length nodding; branches long, geminate, naked below; spikelets ovate, 3—5-flowered; florets somewhat obtuse, unarmed, nerveless.
HAB. Woods and shaded rocky places. June. 24. *Culm* 3 ft. high, dark green; *stip.* very short; *pan.* few-fl., scab.; *cor.* coriaceous.
8. *F. fascicularis*: culm procumbent, geniculate; panicle subsecund; branches straight, spike-like; spikelets appressed, 8—10-flowered; florets armed; leaves very long.
HAB. Meadows and sandy soils, near the sea. Aug. ☉. *Culm* much branch. from the base; leaves atten.; *pan.* erect, spreading.
9. *F. clandestina*: panicle partly concealed in the sheaths; branches solitary, simple; spikelets 10-flowered; florets awned.
HAB. New-York. *Culm* a span high; *leav.* lin.; *spik.* sess. and *pedunc.*; *cor.* term. by a short bristle. †.

76. CERATOCHLOA.

C. unioloides : panicle nodding, spreading ; spikelets oblong-lanceolate, compressed, 6—8-flowered ; florets acuminate, unarmed ; sheaths bearded at the throat ; the lower ones hairy ; root fibrous.

HAB. Rich bottom lands. July—Aug. ☉ and ♀. *Culm* 12—18 in. high ; *leav.* pubesc. ; *pan.* small ; *branch.* geminate, pubesc.

77. DIARRHENA.

D. americana.

HAB. Banks of rivers. ♀. *Culm* erect, nearly naked, slender ; *leav.* rad. ; broad ; *pan.* racemose ; *spik.* about 2-fl. ; *fl.* diverging ; *cor.* smooth ; *stam.* 2—3.

78. DACTYLIS. Orchard-grass.

D. glomerata : panicle secund, glomerate ; leaves carinate.

HAB. Fields, meadows, &c. May—June. ♀. *Culm* 2—3 ft. high ; *panic.* contract. *glum.* strongly ciliate.

79. DANTHONIA.

D. spicata : panicle simple, appressed ; spikelets 7—9, about 7-flowered ; inferior valve of the corolla hairy ; leaves subulate ; lower sheaths hairy at the throat.

HAB. Dry woods and sandy fields. June—July. ♀. *Culm* cespitose, 18 in.—2 ft. high ; *leav.* hairy above ; *pan.* spiked.

80. TRisetum.

1. *T. palustre* : panicle contracted, nodding, somewhat verticillate ; calyx 2—3-flowered ; florets smooth, acuminate ; the inferior one awnless ; inferior valve of the superior floret bicuspidate, awned below the tip.

HAB. Wet meadows. June—July. ♀. *Culm* 1—2 ft. high, erect ; *leav.* flat, smooth ; *pan.* few fl., pale green.

2. *T. purpurascens* : panicle very simple, somewhat racemose, few-flowered ; calyx 3-flowered ; glumes

very unequal, entire; culm and leaves smooth; stipule very short, truncate.

HAB. Mountain meadows. June. 4. *Culm 2 ft. high, leafy; pan. sub-racemose; spik. terete; cal. purple.*

81. BROMUS. Brome-grass.

1. *B. secalinus*: panicle spreading, a little branched; spikelets oblong-ovate, compressed; florets about 10, distinct, rather remote, longer than the flexuous bristles, leaves somewhat hairy.

HAB. Cultivated grounds. June. ☉. *Culm 2—3 ft. high; nodes swelled and pubesc.; leav. dark green; pan. ovate, flat when old.*

2. *B. mollis*: panicle erect, contracted; spikelets oblong-ovate, somewhat compressed, pubescent; bristle straight, as long as the corolla; leaves very softly pubescent.

HAB. Fields and pastures. June. ♂. *Culm 2 ft. high, mostly pubesc.; leav. pale green; spik. 5—10-fl.*

3. *B. purgans*: panicle nodding; spikelets lanceolate, terete; florets hairy; bristle straight; leaves smooth; sheaths hairy.

HAB. Wet meadows and banks of rivers. Aug. 4. *Culm 4 ft. high, smooth; sheaths retrorsely hairy; spik. 6—8-fl.*

4. *B. ciliatus*: panicle nodding; spikelets oblong, terete, 8—10-flowered; glumes acute, (not mucronate,) ciliate; corolla hairy; margin villosely ciliate; bristle short.

HAB. Banks of rivers. June. 4. *Culm 3 ft. high, pubesc. at the joints; leav. pale green, hairy both sides; pan. with 2 bracts at base.*

5. *B. pubescens*: panicle at length nodding; spikelets lanceolate, terete; florets pubescent; leaves and lower sheaths pubescent.

HAB. Woods. June. 4. *Culm 4 ft. high, hairy below; leaves smooth beneath.*

82. ARRHENATHERUM.

1. *A. avenaceum*: panicle equal, nodding; awn as long again as the flower; culm geniculate, smooth; root nodose.

HAB. Fields. June. 4. *Root creeping; culm 3 ft.*

high; pan. loose; fl. brownish, hairy at base; awn contorted.

2. *A. pennsylvanicum*: panicle attenuated; awn twice as long as the florets; seed villous.

HAB. Fields and open woods. July. 4. *Culm smooth; branches of the pan. short; awn genic.*

83. AVENA. Oat-grass.

A. præcox: panicle in a dense raceme; florets as long as the calyx; awn exserted; leaves setaceous.

HAB. Sandy fields. June. ☉. *Cespitose, 3—4 in. high; sheaths angular; pan. oblong; spik. 2-fl.; cal. longer than the fl.*

84. AIRA. Hair-grass.

1. *A. flexuosa*: panicle spreading, trichotomous; branches flexuous; calyx a little shorter than the florets, and about the length of the awn; leaves setaceous; culm nearly naked.

HAB. Rocky hills. June. 4. *Culm 1½—2 ft. high; leav. mostly rad.; pan. capill.; cor. hairy at base.*

2. *A. cespitosa*: panicle diffuse; florets about the length of the calyx; awn short, straight; leaves flat.

HAB. Swamps. June. 4. *Culm cespit., 18 in. high; leav. very narrow; pan. capill.; cal. blueish.*

3. *A. aristulata*: panicle capillary, spreading; branches verticillate and flexuous; calyx 2-flowered, shorter than the florets; superior floret pedicellate; inferior valve of the corolla truncate, laciniate, with an awn a little below the middle scarcely exserted.

4. *A. pumila*: panicle small, fastigate, few-flowered; pedicels short; florets awnless, obtuse, twice the length of the calyx; valves with membranaceous margins; leaves flat, smooth; culm erect, scarcely longer than the leaves.

HAB. In barren clayey soil. June. 4. *An inch high, growing in tufts.*

85. LOLIUM. Darnel.

1. *L. perenne*: florets much longer than the calyx, unarmed, linear-oblong, compressed; root perennial.

HAB. Meadows and road-sides. May—June. 4.

Root creeping ; culm 18 in. high, erect ; leaves smooth ; spike 6 in. long ; rach. flex.

2. *L. temulentum* : florets shorter than the calyx, as long as the bristle at their extremity ; root annual ; culm scabrous above.

HAB. Meadows. July. *Root fib. ; culm 2 ft. high ; spikelets much compress., 5—7-fl.*

86. ELEUSINE.

E. indica : spikes straight, erect, in pairs or quarter-nate ; rachis linear ; spikelets lanceolate, about 5-flowered ; culm compressed, declined.

HAB. Cultivated grounds, and road-sides. July—Novem. ☉. *Culm 8—12 in. high ; leav. distichous ; spik. gen. in pairs ; rach. compress.*

87. TRITICUM. Wheat.

T. æstivum : spike parallel, compressed ; glumes 4-flowered, ventricose ; bristles generally much longer than the florets.

HAB. In neglected fields. June. ☉. *Culm 3—4 ft. high ; rach. articul. ; brist. 2—3 in. long.*

88. AGROPYRON.

1. *A. repens* : spikelets oblong, 5-flowered ; glumes subulate, many-nerved ; florets acuminate ; leaves flat ; root creeping.

HAB. Fields and cultivated grounds. July. ☿. *Root artic., white, very long ; culm 2 ft. high ; fl. sometimes with a short bristle.*

2. *A. caninum* : spikelets about 5-flowered, compressed ; glumes 3-nerved, and, as well as the florets, armed with a bristle at the tip ; root fibrous.

HAB. Delaware. ☿. *Culm 2—3 ft. high ; spik. sometimes 6-fl. ; bristle longer than the flowers.*

89. SECALE. Rye.

S. cereale : glumes and bristles scabrous-ciliate ; corolla smooth.

HAB. Neglected fields. June. ☉ or ♂. *Culm 3—4 ft. high ; glum. ciliate, subulate ; bristle long.*

90. ELYMUS. Lyme-grass.

1. *E. virginicus*: spike erect, coarctate; spikelets in pairs, 2—3-flowered; florets smooth; glumes lanceolate, nerved.

HAB. Banks of rivers. July—Aug. 4. *Culm* 3—4 ft. high; *leav.* bright-green; *spik.* stiffly erect.

2. *E. canadensis*: spike nodding at the extremity, patulous; spikelets 3—5-flowered; florets hairy; glumes linear-lanceolate.

HAB. Banks of rivers. Aug. 4. *Root* creeping; *culm* 3—4 ft. high; *leav.* dark-green; *spik.* gen. pendulous at the extrem.

β. glaucifolius: leaves glaucous.

HAB. Rocky shores. Aug.

3. *E. villosus*: spike a little nodding at the extremity, patulous; rachis and florets hispid-pilose; spikelets geminate, 2—3-flowered; glumes linear, pilose-ciliate, 2-nerved, shorter than the florets.

HAB. Dry hills. July. 4. *Culm* 2—3 ft. high; *leaves* long, 4—5 lin. broad; *spike* at first erect.

4. *E. hystrix*: spike erect; spikelets diverging; calyx 0.

HAB. Rocky hills. July. 4. *Culm* 3 ft. high; *leav.* often glauc.; *rach.* flex.; *spik.* 3 at each joint; *cal* sometimes 1—2-leaved, or a rudiment.

91. MELICA. Melic-grass.

M. speciosa: smooth; panicle loose, erect, few-flowered; branches simple; florets obtuse.

HAB. Mountains. June. 4. *Culm* 3—4 ft. high; *leav.* flat, pubes. beneath; *pan.* subsecund.

92. ATHEROPOGON.

A. apludoides: spikes racemose, distant, pendulous; perfect floret with the inferior valve tricuspidate; lateral bristles of the abortive floret half the length of the terminal one.

HAB. Rocky hills. Aug. 4. *Culm* 18 in. high, assurgent; *leav.* at length involute; *spik.* 20—40, oblong, sess.; *anth.* red.

93. PANICUM. Panic-grass.

1. *P. Crus galli*: racemes alternate and in pairs, com-

pound ; rachis 5-angled ; glumes terminating in hispid bristles ; sheaths glabrous.

HAB. Along ditches, and in cultivated grounds. Aug.—Sept. ☉. *Culm* 2—4 ft. high ; *leav.* broad and flat ; *pan.* dense ; *bristles* sometimes wanting.

2. *P. hispidum* : panicle compound, nodding ; racemes alternate ; glumes terminating in hispid bristles ; sheaths hispid.

HAB. Salt-marshes. Sept.—Oct. ☉. *Culm* 3—4 ft. high, thick ; *fl.* always with bristles.

3. *P. clandestinum* : culm with short axillary branches ; leaves broad-lanceolate, cordate at the base ; sheaths hispid, enclosing the short panicles ; abortive floret neuter, 2-valved ; superior valve obtuse.

HAB. Shady moist places. July—Aug. ♀. *Culm* 2—3 ft. high, erect and rigid ; *leaves* 1 in. broad ; *pan. term. and lat.*

4. *P. pedunculatum* : culm dichotomous ; leaves broad-lanceolate, slightly hairy above, attenuate ; sheaths hispid and papillose ; panicle long-pedunculate, compound, smooth ; spikelets ovate, smooth ; abortive floret 2-valved ; superior valve half the length of the inferior.

HAB. Moist places in woods. July. ♀. *Culm* 3—4 ft. high, much branched above ; *leav.* very acute ; *pan. terminal.*

5. *P. latifolium* : culm mostly simple, bearded at the joints ; leaves oblong-lanceolate, smooth, or with the sheaths, somewhat pubescent ; panicle terminal, a little exsert, simple, pubescent ; spikelets oblong-ovate ; abortive floret antheriferous, 2-valved ; superior valve subherbaceous, nearly as long as the inferior, acute.

HAB. Woods and shady thickets. June—July. ♀. *Culm* 1 ft. high ; *leav.* 1 in. broad ; *pan.* about 15-fl. downy.

6. *P. scoparium* : whole plant softly villous ; leaves lanceolate ; panicle erect, compound, setaceous, much branched ; spikelets turgid, ovate, pubescent.

HAB. New-Jersey. ♀. *Culm* 2 ft. high, mostly simple ; *leav.* somewhat waved ; *fl.* largest of our species.

7. *P. nervosum* : culm simple ; nodes smooth ; leaves broad-lanceolate, smooth, a little ciliate on the mar-

gin ; panicle much branched, smooth, many-flowered ; spikelets oblong ; abortive floret antheriferous, with the superior valve subherbaceous, shorter than the inferior.

HAB. Boggy meadows. July. 4. *Culm* 3—4 ft. high, smooth ; *leav.* subcoriaceous ; *pan. pedunc.* or sessile ; *fl.* large.

8. *P. macrocarpon* : culm erect, simple ; leaves linear-lanceolate, erect, a little hairy beneath ; joints naked ; sheaths hispid ; panicle rather compound, smooth ; spikelets ovate-globose ; abortive floret neuter.

HAB. Banks of rivers. July. 4. *Culm* 3 ft. high ; *pan.* few-fl., flexuous ; *fl.* strongly nerved, subglobose ; *inf. glume* very broad.

9. *P. pubescens* : erect, much branched, leafy, softly pubescent ; leaves lanceolate, ciliate ; panicle small, few-flowered, free ; spikelets subglobose-obovate, pubescent.

HAB. Woods and fields. June. 4. *Culm* 18 in. high ; *nodes* hairy ; *sheaths* retrorsely ciliate ; *pan.* with horizon. branches.

10. *P. involutum* : culm cespitose, simple, or a little branched at the base ; leaves erect, somewhat rigid, very narrow, at length involute ; panicle simple, few-flowered ; florets acuminate ; superior valve of the neuter floret very small.

HAB. Massachusetts. 4. *Culm* 1 ft. high ; *leav.* a little hairy ; *pan.* 10—20-fl. ; *fl.* large.

11. *P. depauperatum* : culm cespitose, hairy at the joints ; leaves linear-lanceolate, smooth or hairy ; sheaths pubescent ; panicle few-flowered ; branches in pairs, one of them 2-flowered, the other 1-flowered.

HAB. Barren sandy soils. May—June. 4. *Culm* 1 ft. high ; *lower leav.* short ; *pan. term.* ; *branches* tortuous.

12. *P. dichotomum* : culm much branched and dichotomous above ; branches fasciculate ; leaves very numerous, lanceolate, smooth, panicle simple, capillary, lax ; abortive floret neuter ; superior valve minute, bifid.

HAB. Dry woods. July—Sept. 4. *Culm erect*, 8—18 in. high; joints hairy; leav. spreading; fl. minute.

α. curvatum: culm very tall, rather rigid; branches few and a little curved.

β. fasciculatum: culm low, erect or decumbent; branches and leaves densely fasciculate; panicles very small, concealed among the leaves.

γ. gracile: culm tall, slender; leaves membranaceous.

HAB. *α.* In moist meadows. *β.* In sandy fields. *γ.* In swamps.

13. *P. nitidum*: culm slender, simple, erect, smooth; sheaths bearded at the throat; leaves very few, broad-linear; panicle capillary, rather crowded, compound, remote, smooth; spikelets minute, obtuse, ovate, slightly pubescent; inferior glume very small.

HAB. Meadows and woods. June—July. 4. *Culm* 18 in.—2 ft. high, mostly simple; nodes annulate; leav. a little shining.

α. ciliatum: culm hairy; leaves linear-lanceolate, (the lowest ones broader,) sparingly hirsute, ciliate on the margin; panicle with the branches and flowers pubescent.

β. ramulosum: culm more branched; panicle contracted; branches smooth.

γ. gracile: culm very slender, smooth; leaves very narrow, and with the sheaths smooth; panicle nearly simple, few-flowered, smooth; superior valve of the abortive floret minute, entire. ?

δ. pilosum: culm simple, very hairy; lower leaves approximate, and broad, lanceolate; upper ones linear, rather rigid, somewhat hairy on the upper surface, ciliate at the base; sheaths villose and minutely papillose; panicle sub-contracted; branches virgate, and with the flowers, pubescent.

ε. glabrum: smooth on every part, except the base of the leaves, nearly simple; lower leaves short, approximate, sub-cartilaginous; panicle branched, almost verticillate; spikelets large; superior valve of the abortive floret entire.

ζ. barbatum: culm simple, smooth; nodes hairy; leaves linear-lanceolate; sheaths smooth, except on the margin; flowers minutely pubescent.

HAB. α . In pine-barrens. β . Sandy swamps. γ . In woods. δ . Dry woods. ϵ . Meadows. ζ . Woods and meadows.

14. *P. agrostoides*: culm compressed, smooth, erect; leaves very long; panicles lateral and terminal, pyramidal, spreading; branches racemiferous; spikelets appressed; abortive floret neuter, with the valves nearly equal.

HAB. Wet meadows. July—Sept. 4. *Culm* 2—3 ft. high; *leaves* numerous at the root; *pan.* dark purp.

15. *P. virgatum*: whole plant very smooth; panicle diffuse, very large; flowers acuminate; valves of the abortive floret nearly equal.

HAB. Margins of salt marshes. July—Aug. 4. *Culm* 3—4 ft. high; *leav.* long, flat; *pan.* virgate; *spik.* large.

16. *P. anceps*: culm compressed; sheaths ancipitous, pilose; panicle with nearly simple branches; spikelets sub-racemose, much acuminate; abortive floret neuter, with the superior valve bifid.

HAB. In fields. July—Aug. 4. *Culm* 3 ft. high; *leav.* very long; *pan.* pyram.; *spik.* appress.

17. *P. rectum*: panicle solitary, shorter than the terminal leaf; branches simple, flexuous; spikelets alternate, peduncled, obovate, turgid; glumes striate, acute; leaves linear, straight, tapering to a sharp point, striate and scabrous above, hairy beneath; sheaths with very long hairs.

HAB. Banks of rivers, July. 4.

18. *P. verrucosum*: culm slender, decumbent and geniculate, branched below, and with the leaves smooth; panicle much spreading, few-flowered; flowers verrucose; abortive floret 1-valved.

HAB. Swamps. Aug. 4. *Culm* 18 in. high; *nodes* smooth; *leav.* bright green; *pan.* lat. and term.; *fl.* verrucose.

19. *P. proliferum*: culm assurgent, geniculate at base, very smooth; panicles terminal and axillary; smooth; spikelets racemose; abortive floret 1-valved.

HAB. Wet meadows. Sept. 4. *Whole plant* very

very smooth ; culm 2—4 ft. long, succul. ; leav. broad ; pan. large ; anth. orange.

20. *P. capillare* : culm nearly simple ; sheaths very hairy ; panicle large, capillary, expanding, loose ; spikelets on long peduncles, acuminate, smooth ; abortive floret 1-valved.

HAB. Cultivated grounds. Aug.—Sept. 4. *Culm erect, 1—2 ft. high ; sheaths hispid ; branch. of the pan. reflex. when old.*

β. *sylvaticum* : culm branched at the base, very slender ; leaves linear.

HAB. In dry woods. Aug.

21. *P. longifolium* : whole plant very smooth ; culm compressed, erect, simple, slender ; leaves very long and narrow ; panicle simple, elongated, racemose ; spikelets acuminate ; abortive floret neuter, 2-valved.

HAB. Pine barrens. Sept.—Oct. 4. *Culm 2 ft. high ; pan. small, few-fl. ; inf. glume acuminate.*

94. HIEROCHLOA.

1. *H. borealis* : panicle subsecund, a little spreading ; peduncles smooth ; florets unarmed ; inferior valve of the corolla ciliate on the margin ; root creeping.

HAB. Bog-meadows. May. 4. *Sweet-scented ; culm 18 in. high ; leav. smooth and shining ; pan. few-fl. ; spik. brown and purple.*

2. *H. alpina* : panicle ovate, contracted ; spikelets compressed, longer than the branches ; glumes lanceolate, almost nerveless ; lateral florets triandrous ; one of them with an awn about as long as the valves ; sides almost smooth ; margin ciliate.

HAB. High mountains. June. 4. *Culm 8 in. high, smooth, firm, fl. not tumid, larger than in the preceding.*

95. HOLCUS. Soft grass.

- H. lanatus* : panicle equal ; florets shorter than the calyx, the superior with a recurved awn ; root fibrous.

HAB. Wet meadows. Aug. 4. *Whole plant hoary-pubescent ; culm 18 in. high ; pan. oblong, contract. ; fl. whitish,*

96. SETARIA.

1. *S. viridis*: spike cylindrical; involucre of 4—10 fasciculate bristles, scabrous upward; spikelets geminate; perfect floret smooth; sheaths pubescent.
HAB. Cultivated grounds. July—Aug. ☿. Culm $1\frac{1}{2}$ ft. high, simp.; leav. smooth; invol. longer than the fl.
2. *S. glauca*: spike cylindrical; involucre of many fascicled bristles, scabrous upward; perfect floret transversely rugose.
HAB. Fields and cultivated grounds. July—Aug. ☉. Culm 2 ft. high; invol. yellow when old.
β. *purpurascens*: sheaths hairy; glumes and bristles of the involucre purple.
3. *S. verticillata*: spike subverticillate; bristles of the involucre 2, retrorsely scabrous; spikelets solitary; corolla of the perfect floret nearly smooth.
HAB. Sandy cultivated grounds. July. ☉. Culm 18 in. high, smooth; spike 2 in. long; rach. hispid; invol. purplish.
4. *S. italica*: spike compound, interrupted at the base, nodding; spikelets conglomerate; involucre many times longer than the flowers; rachis tomentose.
HAB. Borders of ditches. July—Aug. ☉. Culm 4 ft. high, sub-compress.; pan. 6—8 in. long; invol. 1—2 in. long.

97. DIGITARIA.

Crab-grass.

1. *D. sanguinalis*: spikes numerous, fasciculate, a little spreading; leaves and sheaths somewhat hairy; spikelets oblong; florets pubescent on the margin.
HAB. Cultivated grounds and waste places. Aug. ☿. Culm decumb. and assurg.; spik. 4—6; rach. flex.; spikelets by pairs.
2. *D. glabra*: spikes digitate, sub-alternate, (3—4,) spreading; leaves and sheaths smooth; spikelets ovate, crowded; calyx equal to the abortive floret, both hairy.
HAB. Sandy fields. Aug.—Sept. ☉. Culm mostly decumbent; spik. much spreading, 2 in. long.
3. *D. serotina*: decumbent; leaves and sheaths very

pubescent ; spikes numerous, setaceous ; spikelets all pedicellate ; inferior glume very minute.

HAB. Fields. 4. *Root creeping ; culm 12—18 in. long.*

4. *D. filiformis* : culm erect, filiform ; leaves somewhat glabrous ; spikes 2—4, filiform, erect ; spikelets in threes, all pedicellate ; calyx 1-valved, as long as the abortive floret, pubescent.

HAB. Gravelly soils and sandy woods. Aug. ☉. *Culm simp., 12—18 in. high ; leav. short ; spik. mostly 2.*

98. ANDROPOGON. Beard-grass.

1. *A. scoparium* : spikes simple, lateral and terminal, pedunculate, in pairs ; rachis hairy ; abortive floret neuter ; valves awned.

HAB. Barren soils. Aug. 4. *Culm 3 ft. high ; lower sheaths hairy ; spik. slend., flexuous.*

2. *A. virginicum* : culm compressed ; superior leaves and sheaths smooth ; spikes short, 2—3 from each sheath, partly concealed at the base ; rachis subterete ; abortive flower a mere pedicel without valves ; perfect flower monandrous.

HAB. Dry swamps. Sept. 4. *Culm 3 ft. high ; inf. leav. hairy ; rachis pilose.*

3. *A. macrourum* : spikes fasciculate, in dense, lateral, and terminal fastigate panicles ; flowers monandrous ; awn straight ; abortive floret without valves.

HAB. Swamps. Sept.—Oct. 4. *Culm much branched above ; spikes vaginate, partly concealed.*

4. *A. furcatum* : spikes digitate, generally by fours ; abortive flowers staminiferous, awnless, resembling the perfect one, the awn of which is subcontorted.

HAB. Rocky banks. Aug.—Sept. 4. *Culm 4 ft. high ; rad. leav. very long ; cal. brownish.*

5. *A. nutans* : panicle oblong, branched, nodding ; spikelets by pairs ; calyx hairy, rufescent ; awn contorted.

HAB. Fields and hills. Sept.—Oct. 4. *Culm 3—6 ft. high ; pan. large ; abort. fl. a rudiment without valves.*

99. HORDEUM. Barley.

H. jubatum : lateral flowers abortive, neuter ; bristles

of the calyx and corolla three times as long as the flowers.

HAB. Marshes. ♂. Culm 2 ft. high, *slend. sim.* bristles of the fl. capillary.

TRIGYNIA.

100. HOLOSTEUM. *Caryophylleæ.*

H. *succulentum*: leaves elliptical, fleshy.

HAB. Coldenham, New-York. +.

01. MOLLUGO. Indian-chickweed. *Caryophylleæ.*

M. *verticillata*: leaves verticillate, cuneiform, acute; stem branched, depressed; peduncles 1-flowered.

HAB. Fields. July—Sept. ☉. Stem prostrate, spreading, dichot.; pedunc. axill.; fl. small, white.

102. LECHEA. *Caryophylleæ.*

1. L. *major*: plant hirsute on every part; leaves oblong-lanceolate, mucronate; panicle leafy, pyramidal; branches floriferous towards their extremities; flowers in fasciculate racemes, secund, on short pedicels.

HAB. Dry woods and hills. Aug. 24. Stem erect, often surculose; fl. minute, round; stam. 3—9.

2. L. *minor*: whole plant nearly glabrous; stem assurgent; leaves linear-lanceolate, acute; panicle leafy; branches elongated; flowers on short pedicels.

HAB. Dry woods. Aug.—Sept. Stem slender, 8 in. high; fl. twice as large as the preceding.

3. L. *racemulosa*: plant covered with an appressed pubescence; stem erect, with slender, paniculate branches above; leaves linear, acute, ciliate; flowers rather remote, alternate; raceme naked.

HAB. Sandy fields. +.

4. L. *thymifolia*: whitish-villose on every part; stem erect; leaves linear, acute; panicle leafy, elongated; branches short; flowers minute, in lateral and terminal fascicles; pedicels very short.

HAB. Sandy sea-coast. Aug. 4. Stem a foot high, erect, firm, much branched; leav. vill. at base.

103. PROSERPINACA. *Haloragææ.*

1. P. *palustris*: leaves linear-lanceolate, serrate; the lower ones pinnatifid.

HAB. In water. July—Aug. 4. *Root creep.*; stem partly submerg., red; *fl. sm., axillary.*

2. *P. pectinacea*: leaves all pectinately pinnatifid.

HAB. Sandy swamps. Aug. 4. *Leav. finely pectinate*; angles of the cap. rather obtuse.

TETRANDRIA.

MONOGYNIA.

A. *Flowers superior.*

† *Monopetalous.*

104. CEPHALANTHUS. *Common cal.* 0; *proper* minute, angular, 4-cleft. *Cor.* tubular, slender, 4-cleft. *Style* much exerted; *stig.* globose. *Cap.* 2-celled, 2-seeded, (mostly 2-partile.) *Recept.* globose, hairy.
105. DIPSACUS. *Flowers* in an ovate or roundish capitulum.—*Common cal.* (involucrum) many-leaved, foliaceous; *proper* superior, of one leaf. *Cor.* tubular, 4-cleft. *Seed* solitary. *Recept.* conic, paleaceous. *Pappus* cyathiform.
106. GALIUM. *Cal.* 4-toothed. *Cor.* monopetalous, rotate, 4-cleft. *Seeds* 2, globose.
107. SPERMACOCE. *Cal.* 4-toothed. *Cor.* infundibuliform, 4-cleft. *Cap.* 2-celled, not 2-parted; cells 1-seeded, bidentate. *Seeds* with inflected margins.
108. DIODIA. *Cal.* deeply 2-cleft, persistent. *Cor.* tubular-infundibuliform, 4-cleft. *Cap.* 2-celled; cells one-seeded.
110. HOUSTONIA. *Cal.* 4-toothed. *Cor.* infundibuliform, 4-cleft. *Cap.* half-superior, 2-celled, 2-valved, many-seeded, opening transversely.
111. MITCHELLA. *Flowers* by pairs upon the same germen. *Cal.* 4-toothed. *Cor.* infundibuliform; tube cylindric; limb 4-parted, spreading, villous on the inner side. *Stam.* scarcely exerted. *Stig.* 4-cleft. *Berry*, by the union of 2 germens, didymous, 4-seeded.

112. LINNÆA. *Cal.* double; that of the fruit 2-leaved, inferior; of the flower 5-parted, superior. *Cor.* turbinate, subcampanulate, 5-lobed, equal. *Stam.* somewhat didynamous. *Stig.* globose. *Berry* dry, 3-celled, (only one of the cells bearing a perfect seed.)

† † *Polypetalous.*

113. SANGUISORBA. *Cal.* 2-leaved. *Cor.* 4-cleft, rotate. *Caps.* quadrangular, between the calyx and corolla, 1—2-celled.
114. CORNUS. Flowers sometimes aggregated in a 4-leaved involucre.—*Cal.* 4-toothed. *Pet.* 4. *Drupe* with a 2-celled nut.
115. LUDWIGIA. *Cal.* 4-parted, persistent. *Cor.* 4-petalled or 0. *Caps.* quadrangular, 4-celled, inferior, many-seeded.

† † † *Apetalous.*

116. ISNARDIA. *Cal.* campanulate, 4-cleft. *Cor.* 0. *Caps.* 4-celled, quadrangular, surrounded by the base of the calyx.

B. *Flowers inferior.*

† *Monopetalous.*

117. PLANTAGO. *Cal.* 4-cleft. *Cor.* 4-cleft; limb reflexed. *Stam.* mostly exserted, very long. *Caps.* 2-celled, opening all round transversely.
118. BARTONIA. *Cal.* 4-parted, appressed. *Cor.* subcampanulate, 4-parted; segments somewhat erect. *Stig.* thick, glandular, somewhat bifid. *Caps.* 1-celled, 2-valved, many-seeded, surrounded by the persistent calyx and corolla.
119. EXACUM. *Cal.* deeply 4-parted. *Cor.* 4-cleft; tube globose. *Caps.* bisulcate, 2-celled, many-seeded, opening at the summit; cells 2-seeded.
120. SWERTIA. *Cal.* flat, 4—5-parted. *Cor.* 4-parted; segments spreading, with 2 nectariferous ciliate pores at the base of each. *Style* short; *stig.* 2. *Caps.* 1-celled, 2-valved, acuminate.
121. FRASERA. *Cal.* deeply 4-parted. *Cor.* 4-parted, spreading; segments oval, with a bearded, orbicular gland in the middle of each. *Caps.* com-

pressed, partly margined, 1-celled. *Seeds* few, imbricate, elliptic, with a membranaceous margin.

122. OBOLARIA. *Cal.* 2-parted, bracteiform. *Cor.* campanulate, 4-cleft; segments entire (or crenulate.) *Stam.* subdidynamous, proceeding from the clefts of the corolla. *Stig.* bifid. *Caps.* ovate, 1-celled, 2-valved, many-seeded.

†† 4-petalled.

123. AMMANNIA. *Cal.* 1-leaved, campanulate, plicate, 3-toothed, inferior. *Cor.* 4-petalled or 0; inserted upon the calyx. *Caps.* 4-celled, many-seeded.
124. PTELEA. *Cal.* 4-parted. *Pet.* 4, spreading. *Stig.* 2. *Samara* compressed, orbicular, 2-celled, 2-seeded.

††† Apetalous.

125. RIVINA. *Cal.* 4-parted, persistent. *Pet.* 0. *Berry* 1-seeded. *Seed* lentiform, scabrous. *Stam.* 8—4—12.
126. ALCHEMILLA. *Cal.* 3-cleft; segments spreading, alternately smaller. *Cor.* 0. *Style* lateral, from the base of the germen. *Fruit* surrounded by the calyx.
127. SYMPLOCARPUS. *Spath* ventricose, ovate, acuminate. *Spadix* subglobose, covered with perfect flowers. *Cal.* deeply 4-parted, persistent; segments cucullate, truncate, becoming thick and spongy. *Pet.* 0. *Style* pyramidal, 4-sided; *stig.* simple, minute. *Seeds* solitary, immersed in the spongy receptacle.

DIGYNIA.

128. HAMAMELIS. *Cal.* 4-cleft, with 3 bracts (involucre) at the base. *Pet.* linear, very long. *Nut* coriaceous, 2-celled, 2-horned, cleft at the top. *Seed* 1 in each cell.

TETRAGYNIA.

129. ILEX. *Cal.* minute, 4—5-toothed. *Cor.* rotate, 4-parted, or 4-petalled. *Style* 0; *stig.* 4. *Berry* 4-seeded.

130. *SAGINA*. *Cal.* 4-leaved. *Pet.* 4. *Caps.* 4-celled, 4-valved, many-seeded.
131. *TILLÆA*. *Cal.* 3—4-parted. *Pet.* 3—4, equal. *Caps.* 3—4, 2 or many-seeded. *Stam.* sometimes 8, 4 sterile.
132. *POTAMOGETON*. *Cal.* 4-leaved. *Cor.* 0. *Anth.* sessile, alternating with the divisions of the calyx. *Nuts* 4, 1-seeded, sessile.
133. *RÜPPIA*. *Cal.* and *cor.* 0. *Seeds* 4, pedicellate.

TETRANDRIA.

MONOGYNIA.

104. *CEPHALANTHUS*. Button-bush. *Rubiaceæ*.

C. occidentalis: leaves opposite or ternate.

HAB. Swamps. July—Aug. $\frac{1}{2}$. *Shrub* 4—5 ft. high; *leav.* ovate-oblong; *fl. wh.*, in glob. heads.

105. *DIPSACUS*. Teasel. *Dipsacæ*.

D. sylvestris: leaves rarely connate; scales of the receptacle straight; involucre curved upward.

HAB. Old fields. July. $\frac{1}{2}$. *Stem* 3—4 ft. high, ang. and prickly; *fl.* pale blue, in oval heads.

106. *GALIUM*. Bed-straw. *Rubiaceæ*.

* *Fruit smooth.*

1. *G. verum*: leaves about 8 in a whorl, linear, grooved, scabrous; flowers in dense panicles.

HAB. Pastures. June—July. $\frac{1}{4}$. *Stem* erect, slender; *leav.* reflexed; *fl.* yellow.

2. *G. trifidum*: stem procumbent, scabrous downward; leaves linear, obtuse, scabrous on the margin and mid-rib; those of the stem in fives; of the branches in fours; flowers in terminal fascicles; pedicels short; corolla mostly 3-cleft.

HAB. Wet places. June—Aug. $\frac{1}{4}$. *Stem* much branch.; *leav.* broad-linear; *fl. wh.*, minute.

β . *latifolium*: leaves obovate-cuneate.

HAB. Wet places.

3. *G. tinctorium*: stem diffuse, smoothish; leaves linear, somewhat acute, slightly scabrous; those of the stem in sixes, of the branches in fours; peduncles elongated, mostly 3-flowered.

HAB. Low grounds. July. 4. *Stem a foot high, weak; fl. white, mostly 4-cleft.*

4. *G. asprellum*: stems diffuse, much branched, retrorsely aculeate; leaves in fives and sixes, lanceolate, acuminate, aculeate on the nerves and margin; pedicels short.

HAB. Shady wet places. June—July. 4. *Stem 1—2 ft. high, very leafy; fl. terminal, white.*

* * *Fruit hispid.*

5. *G. Aparine*: leaves 6 or 8 in a whorl, obovate-lanceolate, hispid above; margin and keel prickly; stem flaccid, retrorsely aculeate; fruit with uncinat bristles.

HAB. Moist thickets. May—June. ☉. *Stem 3—4 ft. long, procumb. or inclin.; fl. white; fruit uncinately hispid.*

6. *G. brachiatum*: stem flaccid, elongated, brachiate-ramose, hispid; branches short; leaves in sixes, oblong-lanceolate, acuminate, smooth; margin and keel setaceously ciliate; flowering branches longer than the whorls, divaricate and dichotomous; pedicels 2-flowered; fruit with uncinat bristles.

HAB. Meadows and woods. June—Aug. +.

7. *G. micranthum*: stem much branched, divaricate, retrorsely aculeate; leaves short, lanceolate, mucronate, smooth, margin and keel aculeate; flowering branches divaricate; pedicels 2-flowered.

HAB. Mountain swamps. July. 4. *Fl. white, very numerous and small; fruit mostly 1-seeded.*

8. *G. triflorum*: stem procumbent, smoothish; leaves in fives and sixes, obovate-lanceolate, mucronate, smooth, scarcely ciliate on the margin; flowering branches elongated, 3-flowered at the extremity; flowers pedicellate; fruit small, hispid.

HAB. Moist thickets. July—Aug. 4. *Stem weak, 3—5 ft. long; leav. membran.; flow. branch. axill. and term.*

9. *G. pilosum*: stem nearly simple, elongated, ascending, with remote joints, hispid; leaves in fours, oval, mucronate, very hairy on every part, nerveless; flowering branches elongated, nearly simple, 3-flowered at the extremity; fruit hairy.

HAB. Dry woods. July—Aug. 24. Stem 1 ft. high; leav. obtuse, punctate; fl. purp.; segments acute.

10. *G. circæzans*: stem erect, smooth; leaves in fours, oval, obtuse, smooth; margin and nerves ciliate; peduncles divaricate, few-flowered; flowers remote, subsessile; fruit nodding, with hooked bristles.

HAB. Rocky woods. June—July. 24. Stem 1 ft. high; branch. at base; leav. 3-nerved; fl. purp.

11. *G. lanceolatum*: stem erect, very smooth; leaves in fours, lanceolate, generally acute, smooth, 3-nerved; margin subciliate; peduncles divaricate; fruit sessile, nodding, covered with hooked bristles.

HAB. Rocky woods. July. 24. Stem 1 ft. high; leav. 2 in. long, membran.; fl. purple.

12. *G. bermudianum*: stem much branched, scarcely pubescent; leaves in fours, ovate, obtuse, smooth, with pellucid dots; margin and nerves pubescent; flowering branches elongated; fruit uncinately hispid.

HAB. Pennsylvania. June. 24. Leav. linear when young, 3-nerved; fl. paniced; seg. of the cor. lanceol. +.

13. *G. boreale*: stem straight and erect, branched, very smooth; branches short; leaves in fours, linear-lanceolate, generally obtuse, 3-nerved; margin involute and scabrous; flowers in a terminal panicle, divaricate; fruit minutely and uncinately hispid.

HAB. Sandy pine woods. Aug.—Sept. 4. Stem 18 in. high; pan. pyramidal, crowded; fl. white.

107. SPERMACOCE.

Rubiaceæ.

- S. diodina*: stem diffuse, terete, hairy; leaves linear-lanceolate, nearly smooth; margin and keel serrulate; stipules with numerous long bristles; flowers axillary, sessile, solitary, alternate; fruit hairy.

HAB. Sandy soils. Aug. ☉. Stem procumb., 6—8 in. long; leav. oppos.; fl. white or pale purp.

108. DIODIA.

Rubiaceæ.

- D. virginica*: smooth; stem procumbent, nearly terete; leaves lanceolate; corolla smooth within; fruit oblong, smooth.

HAB. Sandy wet places. Sept 4. *Stem purp.; leav. oppos.; fl. solitary, oppos., white; cal. subulate.*

109. HEDYOTIS.

Rubiaceæ.

H. glomerata: stem assurgent; leaves lanceolate, pubescent, attenuate at the base; flowers fascicled, axillary and terminal.

HAB. Moist shady places. Aug. ☉. *Stem 1—3 in. high, simp. or branch., pubes.; fl. white, minute.*

110. HOUSTONIA.

Gentianæ.

H. cærulea: stem erect, setaceous, dichotomous; radical leaves spatulate-ovate; peduncles elongated, 1-flowered; segments of the corolla acute.

HAB. Moist rocks. Apr.—May. 4. *Stems numerous, 4—8 in. high; stem leav. narrow; fl. blue.*

2. *H. longifolia*: leaves narrow-lanceolate, tapering at each extremity; flowers terminal, subsessile; stem branched, smooth.

HAB. Mountains. June. 4. *Stem subfastig.; fl. by threes, purp.; segments ovate, acute.*

3. *H. purpurea*: stem erect, branched above, pubescent at the joints; leaves sessile, ovate or lanceolate; fascicles of flowers terminal, corymbose.

HAB. Dry woods. July. 4. *Leaves broad, rounded at base, 3-nerv.; fl. purp.*

4. *H. ciliolata*: radical leaves ovate, obtuse, attenuate at the base; margin ciliate; stem-leaves ovate-spathulate, sessile; flowers in terminal corymbs, pedicellate; peduncles trichotomous; segments of the calyx linear-lanceolate; stem smooth, branched above.

HAB. Moist rocks. 4. *Stem 4—5 in. high; rad. leav. crowded; fl. pale purple.*

5. *H. pubescens*: leaves cuneiform, acute, pubescent; the inferior ones semi-petiolate, lanceolate; superior ones semi-oval, sessile; panicle trichotomous, terminal.

HAB. Pennsylvania. +.

111. MITCHELLA.

Partridge-berry. Rubiaceæ.

M. repens.

HAB. Woods. June—July. 4. *Evergreen, creeping, branched, leav. oppos., roundish, petioled, smooth; fl. term., white, fragrant.*

112. LINNÆA.

Caprifolia.

L. borealis.

HAB. Mountain woods. July. 4. *Evergreen, creeping; leav. oppos., ovate-round; pedunc. erect; fl. 2, drooping, wh. or pale rose-col.*

113. SANGUISORBA. Great Burnet. *Rosaceæ.*

1. *S. canadensis*: spikes cylindrical, very long; stamens much longer than the corolla.

HAB. Bog-meadows. Aug.—Oct. 4. *Stem 2 ft. high, smooth; leav. pinnate; leaflet. ovate, serrate; fl. white.*

2. *S. media*: spikes cylindrical; stamens longer than the corolla; (calyx subciliate.)

HAB. Wet meadows. July—Aug. 4. *Leaflet. ovate-lanceol.; spik. ovate, red. +.*

114. CORNUS. Dog-wood, &c. *Caprifolia.*

* *Flowers capitate, surrounded by an involucre.*

1. *C. canadensis*: herbaceous; upper leaves verticillate, veined; leaves of the involucre ovate, acuminate; drupe globose.

HAB. Mountain meadows and swamps. May—June. 4. *Stem 6 in. high; head term., pedunc.; invol. white.*

2. *C. florida*: arborescent; leaves ovate, acuminate; involucre large, with obcordate leaflets.

HAB. Woods. May—June. *Tree 15—30 ft. high; leav. oppos.; invol. very large, white or pale rose-col.*

** *Flowers naked, cymose.*

3. *C. sericea*: branches expanded; leaves ovate, acuminate, silky-ferruginous beneath; cymes depressed, woolly.

HAB. Shady moist places. June. *Shrub 8—12 ft. high; cymes pedunc.; fl. white; drupe ovate, blue.*

4. *C. sanguinea*: branches straight; leaves ovate, green on both sides; cymes expanding.

HAB. Around lakes. June—July. *Shrub 8—12 ft. high ; leav. broad ; drupe dark brown. +.*

5. *C. circinata*: branches verrucose ; leaves broad, oval, (orbicular) acuminate, white-downy beneath ; cymes depressed.

HAB. Banks of rivers, woods. June. *Shrub 6—8 ft. high ; cyme crowded, nearly smooth ; drupe blue.*

6. *C. alba*: branches recurved, smooth ; leaves ovate, acute, pubescent, hoary beneath ; cymes depressed.

HAB. Wet woods.—*A small tree ; branch. slender ; cymes small ; drupe white.*

7. *C. paniculata* : branches erect ; leaves ovate, acuminate, hoary beneath ; cymes paniced.

HAB. Swamps. June. *Shrub 8—12 in. high ; branch. punct. ; cyme loose ; drupe nearly glob., white.*

8. *C. stricta*: branches straight, fastigiate ; leaves ovate, green on both sides, somewhat naked ; cymes paniced.

HAB. River banks. June. *Shrub 8—15 ft. high, stolonif. ; bran. red, punct. ; drupe blue.*

9. *C. alternifolia*: leaves alternate.

HAB. Shady woods and swamps. June.—*A small tree ; branch. mostly verruc. ; drupe purp., globose.*

115 LUDWIGIA. False Loose-strife. *Onagrace.*

1. *L. macrocarpa*: stem erect, branched, nearly smooth ; leaves attenuate, narrow-lanceolate, pale beneath ; peduncles axillary, 1-flowered ; capsule globose-quadrangular, winged.

HAB. Swamps. July—Aug. *4. Stem 2 ft. high, purp. ; fl. on short pedunc., yellow ; pet. caducous.*

2. *L. pilosa*: stem erect, branched, hairy ; leaves alternate, oblong, sessile ; peduncles 1-flowered, axillary ; capsules globose, quadrangular, winged.

HAB. Ditches and pools, in sandy soils. July—Aug. *4. Stem 2 ft. high ; leav. 1 in. long ; fl. yellow.*

3. *L. uniflora*: stem straight, simple ; leaves alternate, lanceolate, acute, glabrous ; flower terminal ; petals longer than the calyx.

HAB. New-Jersey. +. Probably *L. macrocarpa*.

116. ISNARDIA. *Onagrace.*

1. *palustris*: creeping and shining ; leaves opposite,

ovate-lanceolate, petiolate; flowers axillary, solitary, sessile; capsule subovate, slightly angled.

HAB. Stagnant waters. June. 24. *Swimming or creeping, succul. ; fl. minute, quadrang.*

7.11 PLANTAGO. Plantain. Plantagines.

1. *P. cordata*: leaves ovate, cordate, very broad, subdentate, smooth; spike very long; flowers subimbricated; the inferior ones scattered; bracts ovate, obtuse.

HAB. Wet meadows. June. 24. *Leav. 6 in. long, 3—4 broad; spike 18 in. long; cells of the cap. 2-seed.*

2. *P. major*: leaves ovate, smoothish, subdentate, generally shorter than the petioles; scape terete; spike cylindrical, slender; flowers closely imbricate; capsules many-seeded.

HAB. Fields, waste grounds, &c. May—Aug. 24. *Leav. spreading; scape 8—12 in. long, pubes.; dissep. of the cap. plane.*

3. *P. media*: leaves ovate, pubescent, longer than the petioles; scape terete; spike short, cylindric; cells of the capsule 1-seeded.

HAB. Fields. July. 24. *Leaves spreading; petioles short; spike 1—2 in. long, dense.*

4. *P. virginica*: hairy-pubescent; leaves lanceolate-ovate, subdenticulate; spikes cylindrical, with remote flowers; scape angular.

HAB. Sandy soils. May—June. 24. *Plant gray, 2—3 in. high; spike yellowish; cap. 2-seeded; dissep. plane.*

5. *P. lanceolata*: leaves lanceolate, acute at each end; spike short, ovate-cylindrical; scape angular; capsule 2-seeded.

HAB. Fields, pastures, &c. May—Sept. 24. *Scape 12—18 in. long; spike brownish; stam. very long.*

6. *P. maritima*: leaves linear, grooved, fleshy, hairy near the base; scape terete; spike cylindrical, bracts rather acute.

HAB. Salt marshes. Aug.—Sept. 24. *Scape as long as the leaves; fl. rather remote; caps. 2-seeded.*

7. *P. pusilla*: minutely pubescent; leaves linear-subulate, flat, entire, acute; scape terete, slender.

longer than the leaves ; spike cylindrical, loose ; lower flowers distant ; bracts ovate, acute, as long as the calyx.

HAB. Sandy hills and fields. June. ☉. *Scape* 2—3. in. long ; *segments of the cal. subul.* ; *caps.* 2-seeded.

8. *P. maxima* : leaves ovate, subdenticulate, 9-nerved ; spike cylindrical, imbricate ; scape terete.

HAB. Wet rocky situations. July—Aug. *P. cordata*?

118. BARTONIA. *Gentianæ*.

B. tenella : culm somewhat branched ; peduncles opposite, the lower ones branched ; segments of the corolla oval, acute, scarcely longer than the calyx ; style very short.

HAB. Swamps. Aug.—Sept. ☉. *Stem* 3—8 in. high. very slend. ; *leav. bract-like* ; *fl. small, greenish-white*.

119. EXACUM. *Gentianæ*.

E. pulchellum : calyx 4-parted ; segments subulate ; panicle corymbose ; peduncles filiform.

HAB. Near the sea-coast. Aug. *Flowers rose-colour*.

120. SWERTIA. *Gentianæ*. Felwort.

1. *S. deflexa* : corolla campanulate, with deflexed horns at the base ; leaves ovate ; branches short.

HAB. Borders of lakes. Aug. ♂. *Stem* 18 in. high. nearly simp. ; *leav. oppos., sess.* ; *fl. greenish-yell.*

2. *S. pusilla* : corolla rotate, twice as long as the calyx : stem simple, 1-flowered ; leaves oblong.

HAB. High mountains. June. ♀. *One in. high* ; *leav. 1—2 pairs* ; *fl. large, blue*.

121. FRASERA. *Gentianæ*. American Colombo.

F. caroliniensis.

HAB. Borders of lakes. July. ♂. *Stem* 3—5 ft. high. erect ; *leav. oppos. and verticill.* ; *fl. greenish-yell. punct.*

122. OBOLARIA. *Gentianæ*.

O. virginica.

HAB. Shady forests. Apr.—May. ♀. *Stem* 3—4 in. high. *cespit.* ; *leav. oppos., obovate* ; *fl. subterm., white or reddish, marcescent*.

123. AMMANNIA. *Salicariæ*.

1. *A. ramosior*: stem erect, thick, subterete; leaves lanceolate, dilated at the base; lower flowers compactly verticillate.

HAB. Brackish meadows. Aug—Sept. ☉. Stem 4–8 in. high, simp. or somewhat branched; pet. purp.

2. *A. humilis*: stem procumbent at the base, branched, slender, quadrangular; leaves lanceolate, alternate at the base; flowers solitary.

HAB. Borders of ponds. Aug. ☉ and ♂. Stem 4–7 in. high, rarely simp.; fl. small, pale purp.

124. PTELEA. *Terebintaceæ*.

P. trifoliata: leaves ternate; flowers in panicles, polygamous.

HAB. Shady moist places. June. Shrub 6–8 ft. high, spreading; leav. petiol.; fl. greenish-white.

125. RIVINA. *Atriplices*.

R. laevis: racemes simple; leaves ovate, acuminate, glabrous, flat; stem terete.

HAB. Pennsylvania? A shrub with the habit of *Phytolacca decandra*. Fl. in axill. racemes.

126. ALCHEMILLA. *Rosaceæ*. Lady's mantle.

A. alpina: leaves digitate, serrate at the extremity, white and satiny beneath.

HAB. High mountains. 4. Fl. white.

127. SYMPLOCARPUS. *Aroideæ*. Skunk-cabbage.

S. foetida.

HAB. Swamps and low grounds. Feb.—Apr. 4. Plant fetid; leaves large, ovate-cord.; spath. purp., spotted, cucull.; spadix pedunc.

DIGYNIA.

128. HAMAMELIS. *Berberides*. Witch-hazel.

H. virginica: leaves obovate, acute, dentate, cordate, with the sinus small.

HAB. Moist woods. Oct.—Nov. Shrub 6–12 ft. high; leav. altern., large; fl. axill., clustered, yell.

B. parvifolia : leaves oblong-ovate, upper part undulately and coarsely crenate ; under surface pubescent, somewhat hirsute ; segments of the calyx oblong ; stamens and perigynous filaments often nearly equal.

HAB. Mountains. *Smaller than the preceding ; fl. bright yellow.*

TETRAGYNIA.

129. ILEX. *Rhamni*. Holly.

1. *I. opaca* : leaves ovate, spinous, acute, smooth, flat ; fascicles of flowers loose, on the base of the younger branches ; peduncles compound.

HAB. Sandy woods. June. *An evergreen tree. 10—40 ft. high ; leav. coriaceous, shining ; fl. yell.-white ; berries red.*

2. *I. canadensis* : leaves deciduous, ovate, very entire, smooth ; peduncles subsolitary, (or fasciculate,) very long, 1-flowered ; fruit obtusely subquad-rangular.

HAB. Rocky hills and mountains. May—June. *Shrub 3—5 ft. high ; leav. mucron. ; fl. dioec., minute ; berries red.*

130. TILLÆA.

T. simplex : stem erect and simple ; leaves connate, oblong-linear and somewhat acute ; flowers alternate, sessile ; petals erect, twice as long as the calyx.

HAB. Muddy banks of rivers. ☉. *Plant minute.*

131. SAGINA. *Caryophyllææ*. Pearl-wort.

1. *S. procumbens* : perennial ; stem procumbent, smooth ; petals very short.

HAB. Near springs. July. *Spreading, 2—4 in. long ; leav. linear-subul. ; pet. sometimes wanting.*

2. *S. apetala* : annual ; stem erect, pubescent ; leaves cuspidate ; flowers alternate ; petals very minute or 0.

HAB. Sandy fields. May—June. *Stems numerous, filif. ; leav. subul. ; fl. on long pedunc.*

132. POTAMOGETON. *Naiades*. Pond-weed.* *Upper leaves floating.*

1. *P. natans*: upper leaves floating; coriaceous, oblong-ovate, on long petioles, (subcordate;) lower ones membranaceous, lanceolate, tapering to a foot-stalk.

HAB. Lakes and slow streams. July—Aug. 24. *Upper leav.* 2—3 in. long, 2 broad, nerved; *spike greenish.*

2. *P. fluitans*: upper leaves floating, coriaceous, oblong-lanceolate, petiolate, tapering at the base, lower ones linear, sessile.

HAB. Ponds and slow streams. July—Aug. 24. *Upper leav.* 3 in. long, 1 broad, olive-green; *pedunc. thick.*

3. *P. heterophyllum*: upper leaves floating, petiolate, elliptical; lower ones sessile, crowded, linear.

HAB. Ponds and slow streams. Aug. 11. *Half the size of the preceding; submerg. leav. very narrow.*

4. *P. diversifolium*: upper leaves floating, elliptical, petiolate, 5-nerved; inferior ones filiform; spike axillary, almost sessile, few-flowered.

HAB. Ponds and slow streams. June. 4. *Stems filif.; upper leav. not an in. long; spik. 4—6 fl.*

** *Leaves all submerged.*

5. *P. perfoliatum*: leaves amplexicaul, cordate, ovate.

HAB. Rivers and lakes. Aug. *Stem dichot.; leaves 1 in. long, subpelluc.; spike few-fl.*

6. *P. lucens*: leaves ovate-lanceolate, petiolate.

HAB. Rivers and lakes. Aug. 24. *Stem terete; leav. 2—3 in. long, pelluc. reticul.; spik. cylind.*

7. *P. crispum*: leaves lanceolate, tapering, sessile, undulate and serrate.

HAB. Lakes. Aug. 24. *Stem subcomp.; leav. 1½ in. long; spik. 8—10 fl.*

8. *P. compressum*: leaves linear, obtuse, sessile; stem compressed.

HAB. Slow streams. July—Aug. 4. *Stem much branch., thick; pedunc. compress.; spik. 4—6 fl.*

9. *P. pauciflorum* : leaves sessile, narrow-linear, flat ; spike capitate, 4-flowered ; stem slender, terete.
 HAB. Ponds and rivers. July—Aug. 4. *Stem almost filif., much branch. ; spik. on short pedunc.*
10. *P. pectinaceum* : leaves setaceous, distichously approximate, sheathing ; stipules almost wanting ; spike few-flowered, interrupted.
 HAB. Ponds. June. 4. *Stem filif., dichot. ; leav. numerous ; 4—6 in. long ; pedunc. elongat.*

133. RUPPIA. *Naiades.**R. maritima.*

HAB. Salt marshes, ditches. July. 4. *Floating ; stem long ; leav. setac. flat ; spadix naked, 2-fl. ; anth. large.*

PENTANDRIA.

MONOGYNIA.

A. *Seeds naked.* (ASPERIFOLIÆ.)* *Seeds fixed to the bottom of the calyx.*

134. PULMONARIA. *Cal.* prismatic, pentagonal, 5-toothed. *Cor.* infundibuliform ; border 5-lobed ; orifice naked. *Seeds* imperforate at the base.
135. LITHOSPERMUM. *Cal.* 5-parted ; segments acute, carinate. *Cor.* infundibuliform ; border 5-lobed ; orifice naked. *Stem* included within the tube of the corolla. *Stig.* obtuse, bifid. *Seeds* imperforated at the base, indurated, shining.
136. ONOSMODIUM. *Cal.* deeply 5-parted ; segments linear. *Cor.* subcampanulate ; border ventricose, half 5-cleft ; segments connivent, acute ; orifice naked. *Style* much exerted. *Seeds* ovate, shining, imperforate at the base.
137. ECHIUM. *Cal.* 5-parted ; segments subulate, erect. *Cor.* subcampanulate ; tube very short ; border unequally 5-lobed, the lower segment acute and reflexed ; orifice pervious. *Stig.* bifid. *Seeds* tuberculate, imperforate at the base.

138. **MYOSOTIS.** *Cal.* 5-parted, or 5-cleft. *Cor.* hypocrateriform; segments very obtuse; orifice closed with connivent scales.
139. **LYCOPSIS.** *Cal.* 5-cleft. *Cor.* infundibuliform; orifice closed with ovate, connivent scales. *Seeds* perforate at the base.

* * *Seeds fixed to a central column.*

140. **CYNOGLOSSUM.** *Cal.* 5-parted. *Cor.* short, infundibuliform; orifice closed with connivent scales. *Seeds* depressed.
141. **ROCHELIA.** *Cal.* 5-parted. *Cor.* hypocrateriform; orifice closed with connivent scales. *Seeds* echinate, compressed.

B. *Flowers* 1-petalled, inferior. *Seeds* in a pericarp.

* *Fruit* a capsule.

α. *Capsule* 1-celled.

142. **ANAGALLIS.** *Cal.* 5-parted. *Cor.* rotate, 5-lobed. *Fil.* hirsute at the base. *Caps.* globose, bursting all round transversely, many-seeded.
143. **LYSIMACHIA.** *Cal.* 5-cleft. *Cor.* rotate, (and subcampanulate,) 5-cleft. *Caps.* 1-celled, 5—10-valved.
144. **PRIMULA.** *Flowers* in an involucrate umbel. *Cal.* tubular, 5-toothed. *Cor.* hypocrateriform; tube cylindrical; orifice naked; border 5-lobed; lobes emarginate. *Caps.* 1-celled, opening with 10 teeth.
145. **DODECATHEON.** *Cal.* 5-cleft. *Cor.* 5-parted; segments reflexed. *Fil.* very short; *anth.* connivent. *Caps.* 1-celled, oblong, opening at the apex.
146. **MENYANTHES.** *Cal.* 5-parted. *Cor.* infundibuliform; border spreading, 5-lobed, equal, hairy within. *Stig.* capitate, sulcate. *Caps.* 1-celled, 2-valved; valves seminiferous on the sides.
147. **VILLARSIA.** *Cal.* 5-parted. *Cor.* rotate, 5-lobed; segments bearded at the base, with their margins inflexed. *Glands* (nectaries,) 5, alternating with the stamens. *Stig.* 2-lobed. *Caps.* 1-celled, 2-valved, many seeded.

148. *HOTTONIA*. *Cal.* 5-parted. *Cor.* hypocrateriform, 5-lobed. *Stam.* seated upon the tube of the corolla. *Stig.* globose. *Caps.* 1-celled, globose, acuminate.
149. *SAMOLUS*. *Cal.* 5-cleft, half superior. *Cor.* hypocrateriform, 5-lobed, with 5 intermediate scales (or sterile stamens.) *Caps.* half inferior, 1-celled, 5-toothed, many-seeded; receptacle unconnected.
150. *SABBATIA*. *Cal.* 5-12-parted. *Cor.* rotate, 5-12-parted. *Stig.* 2, spiral. *Anth.* at length revolute. *Caps.* 1-celled, 2-valved.
151. *HYDROPHYLLUM*. *Cal.* 5-parted. *Cor.* subcampanulate, 5-cleft, with 5 longitudinal, margined, melliferous grooves on the inside.
- β. Capsule 2-(3-)celled.*
152. *PHACELIA*. *Cal.* 5-parted. *Cor.* subcampanulate, 5-cleft, with 5 longitudinal margined melliferous grooves on the inside. *Stam.* exerted. *Style* filiform; *stig.* 2. *Caps.* 2-celled, 2-valved, 4-seeded; each of the valves septiferous in the centre.
153. *SPIGELIA*. *Cal.* 5-parted. *Cor.* infundibuliform; border 5-cleft, equal. *Anth.* convergent. *Caps.* didymous, 2-celled, 4-valved, many-seeded.
154. *VERBASCUM*. *Cal.* 5-parted. *Cor.* rotate, 5-lobed, unequal. *Stam.* declined, generally bearded. *Stig.* simple. *Caps.* 2-celled, with inflexed valves, many-seeded.
155. *NICOTIANA*. *Cal.* tubular, 5-cleft. *Cor.* infundibuliform; border plicate, 5-cleft. *Stam.* inclined. *Stig.* capitate. *Caps.* 2-celled, 2—4-valved.
156. *HYOSCYAMUS*. *Cal.* tubular; border 5-cleft. *Cor.* infundibuliform, 5-lobed, irregular; lobes entire. *Stam.* inclined. *Caps.* 2-celled, operculate.
157. *CONVOLVULUS*. *Cal.* 5-parted, naked, or with 2 bracts at the base. *Cor.* campanulate, plicate. *Stig.* 2. *Caps.* 2—3-celled, with as many valves; cells 1—2-seeded.
158. *IPOMÆA*. *Cal.* 5-cleft, naked. *Cor.* infundibuliform, campanulate, 5-plaited. *Stig.* capitate, *Caps.* 2—3-celled, many-seeded.

γ. Capsule 3—5-celled.

159. **PHLOX.** *Cal.* deeply 5-cleft; segments connivent. *Cor.* hypocrateriform; border 5-lobed, flat; tube more or less curved. *Stam.* very unequal; *fil.* inserted into the tube of the corolla above the middle. *Caps.* subrotund, 3-celled; cells 1-seeded. *Seeds* oblong, concave externally.
160. **POLEMONIUM.** *Cal.* campanulate, 5-cleft. *Cor.* campanulate; border 4—5-lobed, erect; tube short, closed by 5 staminiferous valves. *Fil.* bearded at the base. *Caps.* subrotund, 3-celled; cells many-seeded; valves membranaceo-crustaceous. *Seeds* oblong, somewhat triangular.
161. **DIAPENSIA.** *Cal.* deeply 5-parted, with 3 bracts at the base. *Cor.* hypocrateriform; border 5-cleft. *Fil.* compressed, inserted into the summit of the tube, and alternating with the segments of the corolla. *Caps.* 3-celled, 3-valved, many-seeded.
162. **DATURA.** *Cal.* tubular, angular, deciduous; base orbicular, persistent. *Cor.* infundibuliform, plicate. *Caps.* ovate, 2-celled, 4-valved; cells 2-parted.
163. **AZALEA.** *Cal.* 5-parted. *Cor.* short, campanulate, 5-cleft. *Stam.* equal, shorter than the corolla; *anth.* opening longitudinally. *Style* straight, included. *Caps.* 5-celled, 5-valved, opening at the top.

** * Fruit a berry.*

164. **PHYSALIS.** *Cal.* 5-toothed. *Cor.* campanulate-rotate. *Stam.* connivent. *Berry* 2-celled, covered by the inflated calyx.
165. **SOLANUM.** *Cal.* 5—10-parted, persistent. *Cor.* rotate, 1-petalled, 5—6-lobed. *Anth.* oblong, opening at the top by 2 pores. *Berry* 2—6-celled.

*C. Flowers 1-petalled, superior.*** Fruit a capsule.*

166. **CAMPANULA.** *Cal.* mostly 5-cleft. *Cor.* campanulate, 5-cleft. *Fil.* dilated at the base. *Stig.* 3—5-cleft. *Capsule* 3-(rarely 5-) celled, open by lateral pores.

167. LOBELIA. *Cal.* 5-cleft. *Cor.* irregular, 5-parted, cleft on the upper side nearly to the base. *Anth.* united into a tube. *Stig.* 2-lobed. *Caps.* inferior, or semi-superior, 2—3-celled, 2-valved at the apex.

168. DIERVILLA. *Cal.* oblong, 5-cleft, bracteate at the base. *Cor.* infundibuliform, 5-cleft, spreading. *Stig.* capitate. *Stam.* a little exserted. *Caps.* naked, oblong, 4-celled, many-seeded.

* * *Fruit a berry.*

169. LONICERA. *Cal.* 5-toothed. *Cor.* with the tube elongated; border 5-cleft, generally unequal. *Stam.* exserted. *Stig.* globose. *Berries* distinct, 3-celled, many-seeded.

170. XYLOSTEUM. *Flowers* by pairs on the summit of the same peduncle. *Cal.* 5-toothed, with 2 connate bracts at the base. *Cor.* 5-cleft, subequal, or bilabiate. *Berries* by pairs, more or less connate, 2-celled, many seeded.

171. SYMPHORIA. *Cal.* minute, 4-toothed, with 2 small bracts at the base. *Cor.* subcampanulate, short, 5-cleft, nearly equal. *Stam.* nearly exserted. *Stig.* globose. *Berry* crowned with the persistent calyx, 4-celled, 4-seeded; 2 of the cells sometimes abortive.

172. TRIOSTEUM. *Cal.* 5-cleft; segments linear, nearly as long as the corolla. *Cor.* tubular, 5-lobed, subequal, gibbous at the base. *Stam.* included. *Stig.* capitate, lobed. *Berry* 3-celled, 3-seeded, crowned with the calyx.

D. *Flowers* 5-petalled, inferior.

* *Fruit a capsule.*

173. ITEA. *Cal.* minute, 5-cleft. *Pet.* linear, reflexed, spreading, inserted upon the calyx. *Stig.* capitate, 2-lobed. *Caps.* 2-celled, 2-valved, many-seeded. *Seeds* attached to the inflexed margins of the valves.

174. IMPATIENS. *Cal.* 2-leaved, deciduous. *Cor.* irregular. *Nect.* cucullate, calcarate. *Anth.* cohering at the apex. *Caps.* 5-valved, bursting elastically.

175. VIOLA. *Cal.* deeply 5-cleft, produced at the base. *Cor.* 5-petalled, irregular; upper petal corniculate at the base. *Anth.* connivent, cohering. *Caps.* 1-celled, 3-valved.
176. CLAYTONIA. *Cal.* 2-leaved. *Pet.* 5, emarginate, *Stig.* 3-cleft. *Caps.* 1-celled, 3-valved, 3—5-seeded. *Seeds* reniform.
177. CEANOTHUS. *Cal.* turbinate, 5-cleft. *Pet.* 5, saccate and arched, with long claws. *Stig.* 3. *Caps.* tricoccous, 3-celled, 3-seeded, 3-parted, opening on the inner side.
178. EUONYMUS. *Cal.* 5-parted, or 5-cleft, its base internally bearing a peltate disk. *Pet.* 5, spreading, inserted on the outside margin of the glandular disk. *Stam.* 5. *Caps.* 5-angled, 5-celled, 5-valved, coloured; cells 2-lobed. *Seeds* arillate.
179. CELASTRUS. *Cal.* 5-lobed, flat. *Cor.* 5-petalled. *Stam.* seated around a 5-toothed glandulous disk. *Caps.* or *theca* obtusely triangular, 3-celled, 3-valved; valves septiferous in the centre; cells 1—2-seeded. *Seeds* covered with a 4-cleft coloured arillus.

* * *Fruit a berry.*

180. RHAMNUS. *Cal.* urceolate, 4—5-cleft. *Pet.* 4—5, opposite the stamens, (sometimes abortive.) *Stam.* 4—5. *Stig.* 2—4 cleft. *Berry* 3—4-seeded.
181. VITIS. *Cal.* minute, 5-toothed. *Pet.* 5, cohering at the apex, deciduous. *Stig.* sessile, obtuse, capitate. *Berry* 1-celled, 5-seeded. *Seeds* subcordate.
182. CISSUS. *Cal.* minute, 4—5-toothed. *Pet.* 4—5, unconnected above, spreading, deciduous. *Germ.* surrounded with a glandulous disk. *Berry* 2—4-seeded.

E. Flowers 5-petalled, superior.

183. RIBES. *Cal.* superior, campanulate, 5-cleft. *Pet.* and *stam.* inserted upon the calyx. *Style* 2-cleft. *Berry* many-seeded.

F. Flowers incomplete.

184. HAMILTONIA. Polygamous. PERFECT FL. *Cal.* turbinate, campanulate, 5-cleft. *Cor.* 0. *Nect.*

with the disk 5-toothed. *Style* 1 ; *stig.* 2—3, sublenticular ; *germ.* immersed in the nectary. *Drupe* pyriform, 1-seeded, enclosed in the adhering base of the calyx. *STAM. FL.* resembling the perfect, except in wanting the pistil.

185. **THESIUM.** *Cal.* 1-leaved, tubular-campanulate, 4—5-cleft. *Anth.* attached to the calyx by a tuft of filaments. *Nut* 1-seeded, covered with the persistent calyx.
186. **ANYCHIA.** *Cal.* 5-parted ; segments oblong, connivent, callous, and subsaccate at the apex. *Cor.* 0. *Fil.* 3—5, distinct, without intermediate setæ. *Stig.* subcapitate. *Utriculus* 1-seeded, covered by the calyx.
187. **GLAUX.** *Cal.* campanulate, 5-lobed, coloured. *Cor.* 0. *Caps.* globose, acuminate, 1-celled, 5-valved, 5-seeded.

DIGYNIA.

A. Flowers monopetalous, inferior

* Follicles 2.

188. **APOCYNUM.** *Cal.* very small, 5-cleft. *Cor.* campanulate ; border with 5 short spreading or revolute lobes. *Anth.* saggitate, connivent, cohering to the stigma by the middle. *Glandular teeth* 5, acute, alternating with the stamens, and opposite the segments of the corolla.
189. **PERIPLOCA.** *Cal.* 5-cleft. *Cor.* rotate, flat ; orifice surrounded with an urceolate, 5-cleft-crown ; segments awned. *Anth.* bearded on the back ; *pollinia* dilated at the apex and united to the corpuscles of the stigma, solitary, composed of four confluent grains.
190. **GONOLOBUS.** *Cor.* rotate, deeply 5-parted. *Staminial crown* (*lepanthium* or nectary) scutelliform, pentangular. *Anth.* opening transversely, terminated by a membrane. *Pollinia* 5-pairs, not separating into grains. *Stig.* depressed. *Seeds* comose.

191. ASCLEPIAS. *Cal.* small, 5-parted. *Cor.* rotate, 5-parted, mostly reflexed. *Staminial crown* simple, 5-leaved; leaflets opposite the anthers, with a subulate averted process at the base. *Stig.* with the 5 angles (corpuscles) opening by longitudinal chinks. *Pollinia* 5 distinct pairs.

* * *Fruit capsular.*

192. GENTIANA. *Cal.* 4—5 parted, or cleft. *Cor.* tubular at the base, campanulate; border 4—5 cleft; segments ciliate or entire, spreading, erect, or connivent. *Stam.* included. *Styles* 0, or very short; *stig.* 2. *Caps.* 1-celled, 2-valved; *recept.* 2, longitudinal.
193. CUSCUTA. *Cal.* 4—5 cleft. *Cor.* 4—5 cleft, subcampanulate, marcescent. *Caps* 2-celled, opening all round transversely; cells 2-seeded.

B. *Corolla 5-petalled, inferior.*

194. HEUCHERA. *Cal.* 5-cleft. *Pet.* 5, small, inserted into the margin of the calyx. *Caps.* birostrate, 2-celled, many-seeded.

C. *Corolla 5-petalled, superior.*

195. PANAX. Polygamous. Flowers in a simple umbel. PERFECT. *Cal.* 5-toothed. *Pet.* 5. *Styles* 2—3. *Berry* subcordate, 2—3-seeded. STAMINIF. *Cal.* entire.

D. *Flowers incomplete.*

196. ATRIPLEX. Polgamous. PERFECT FL. *Cal.* 5-parted, inferior. *Cor.* 0. *Stam.* 5. *Style* 2-parted. *Fruit* depressed. PISTILIF FL. *Cal.* 2-parted. *Stam.* 0. *Fruit* compressed. *Seed* vertical.
197. CHENOPODIUM. *Cal.* 5-parted, obtusely pentangular. *Cor.* 0. *Style* deeply bifid. *Seed* lenticular, horizontal, partly covered by the closing calyx.
198. SALSOLA. *Cal.* 5-parted. *Cor.* 0. *Style* bifid. *Seed* 1, horizontal, covered by the connivent calyx. *Embryo* cochleate.

199. ULMUS. *Cal.* campanulate, 4—5-cleft. *Cor.* 0. *Samara* compressed, with a broad membranaceous border.
200. CELTIS. Polygamous. PERFECT FL. *Cal.* inferior 5-parted. *Cor.* 0. *Styles* thick, divaricate. *Drupe* 1-seeded, STAMINIF. *Cal.* 6-parted. *Stam.* 6.

E. UMBELLIFERÆ.

α. Umbels subcapitate.

201. ERYNGIUM. Flowers capitate. *Recept.* paleaceous. *Involucrum* many-leaved, subspinous. *Pet.* reflexed.
202. SANICULA. *Umb.* nearly simple, capitate. *Involuc.* few-flowered. *Fl.* polygamous. *Cal.* 5-parted, persistent. *Fruit* oblong, solid, not ribbed, armed with uncinatè bristles.

b. Umbels imperfect. Involucrum obsolete or 0. (Leaves confluent with the petiole, subsimple.)

203. HYDROCOTYLE. *Umbel* simple. *Fruit* with the back and commissure narrow, laterally compressed, subrotund, 3-ribbed, generally with reticulate veins.

c. Umbel perfect. Universal involucrum, and sometimes the partial wanting. Fruit ovate, solid, 5-costate. (Leaves decom pound.)

204. SISON. *Fruit* ovate, solid, 5-ribbed on the back; intervals convex; sides contracted; raphis excavated.

205. CNIDIUM. *Involucr.* 1-leaved, or 0. *Fruit* ovate, solid. *Ribs* 5, acute, somewhat winged; intervals sulcate, striate.

d. Umbels perfect. Involucrum generally wanting. Fruit corticate, solid or compressed, utriculate.

206. SMYRNIUM. *Involucr.* few-leaved, or 0. *Fruit* solid, ovate; cortex black, 3-ribbed. Sides contracted from the commissure. *Albumen* white.

207. CICUTA. *Involuc.* almost wanting. *Fruit* ovate, solid, 5-ribbed; intervals prominent.

e. *Fruit hispid.*

208. DAUCUS. *Involucr.* pinnatifid. *Fl.* somewhat radiant; those of the disk abortive. *Fruit* oblong, with 5 aculeate ribs; intervals angular, hispid.

f. *Fruit pyramidal, rostrate. Involucrum 0.*

209. MYRRHIS. *Fruit* crowned with the pistils; ribs 5, acute.

g. *Fruit subovate, costate, sulcate. Universal and partial involucra various.*

210. SIUM. *Fruit* somewhat prismatic, with 5 obtuse ribs; intervals subconvex. *Involucr.* entire.

211. CONIUM. *Fruit* ovate, solid, with 5 obtuse ribs, crenulate when immature; intervals flat. *Umbel* with universal and partial *involucra*.

212. LIGUSTICUM. *Fruit* ovate-oblong, with 5 acute ribs; intervals sulcate. Universal and partial *involucra* various.

h. *Fruit compressed, flat, often winged. Involucra various.*

213. HERACLEUM. *Fruit* with a membranaceous margin; ribs 3, dorsal, obtuse; intervals and commissure with clavate spots. *Fl.* subradiant. *Involucr.* 0.

214. PASTINACA. *Fruit* oval, margined; ribs obsolete; intervals striate; commissures 2. Universal and partial *involucra* 0.

215. ANGELICA. *Fruit* subcompressed, with 3 acute winged ribs; intervals sulcate; margin membranaceous.

216. THAPSIA. *Fruit* narrow, slightly compressed, nearly ribless, with 2 dorsal and marginal wings. *Involucra* 0.

TRIGYNIA.

* *Flowers superior.*

217. VIBURNUM. *Cal.* minute, 5-toothed, superior. *Cor.* 5-cleft; lobes spreading or reflexed. *Stigmas* nearly sessile. *Berry* 1-seeded.

218. *SAMBUCUS*. *Cal.* minute, 5-cleft. *Cor.* subrotate, 5-cleft. *Stigmas* minute, sessile. *Berry* globose, 1-celled, 3-seeded.

* *Flowers inferior.*

219. *RHUS*. *Cal.* 5-parted. *Pet.* 5. *Berry* small, subglobose, with one bony seed.
220. *STAPHYLEA*. *Cal.* 5-parted, coloured. *Petals* 5, inserted upon the margin of a glandular, pentangular disk. *Caps.* 2—3, inflated, partly united. *Seeds* 1—2 in each capsule, subglobose, with a lateral cicatrix.

TETRAGYNIA.

221. *PARNASSIA*. *Cal.* 5-parted, persistent. *Pet.* 5; inferior. *Nect.* of 5 scales, inserted into the claws of the petals, fringed with capitate ciliæ. *Stig.* 4, sessile. *Caps.* 1-celled, 4-valved; valves bearing incomplete dissepiments in the middle. *Seeds* membranaceously margined.

PENTAGYNIA.

222. *ARALIA*. Flowers umbelled. *Cal.* 5-toothed, superior. *Pet.* 5. *Stig.* sessile, subglobose. *Berry* 5-celled, 5-seeded.
223. *STATICE*. *Cal.* inferior, 1-leaved, entire, plaited, scarious. *Pet.* 5. *Caps.* 1-seeded, without valves, covered with the persistent calyx.
224. *LINUM*. *Cal.* deeply 5-parted, persistent. *Pet.* 5, unguiculate. *Fil.* united at the base. *Caps.* superior, subglobose, 10-valved, 10-celled. *Seeds* solitary, ovate, compressed.
225. *SIBBALDIA*. *Cal.* 10-cleft, with the alternate segments narrower. *Pet.* 5, inserted in the calyx. *Styles* proceeding laterally from the germen. *Seeds* 5, clustered in the bottom of the calyx.

HEXAGYNIA.

226. *DROSER*A. *Cal.* deeply 5-cleft, persistent. *Pet.* 5. *Anth.* adnate. *Styles* 6. *Caps.* superior, 3-celled, 3—5-valved, many-seeded.

POLYGYNIA.

227. XANTHORHIZA. *Cal.* 0. *Pet.* 5. *Nect.* 5,
obovate, pedicellate. *Caps.* 5—8, 1-seeded,
half 2-valved.

MONOGYNIA.

134. PULMONARIA. Lung-wort. *Boragineæ.*

P. virginica: smooth; stem erect; calyx much shorter than the tube of the corolla; radical leaves obovate-oblong, obtuse; stem leaves narrower.

HAB. Banks of rivers. May. 4. *Leav.* smooth, subglauc.; *fl. in term. racem., large, blue.*

135. LITHOSPERMUM. Gromwell. *Boragineæ.*

1. *L. arvense*: stem erect, branched; leaves linear-lanceolate, rather acute, veinless, hairy; calyx nearly as long as the corolla, with spreading segments; seeds rugose.

HAB. Fields. Apr.—May. ☉. *Hispidly pilose, 8—12 in. high; fl. solitary, axill., small, white.*

2. *L. officinale*: stem erect, much branched; leaves lanceolate, acute, nerved, scabrous above, hairy beneath; calyx as long as the tube of the corolla; seeds smooth.

HAB. Massachusetts. May. 4. *Stem. 2 ft. high, scabr.; fl. axill., solit., pedicell., pale yellow.*

3. *L. maritimum*: very smooth; stem procumbent, branched; leaves oval, spatulate, fleshy; corolla scarcely twice the length of the calyx.

HAB. Sea shores. July. 4. *Stem diffuse; pedunc. lat., 1-fl.; cor. subcampan., blue.*

4. *L. canescens*: stem erect, simple, villous; leaves oblong, obtuse, silky above, subvillose beneath; tube of the corolla as long again as the calyx.

HAB. Fairfield, New-York. June. 4. *Root large, red; fl. subterm., bright orange.*

5. *L. denticulatum*: stem erect; leaves nervose, subglabrous, acute; margin scabrous, with minute teeth; radical ones ovate; those on the stem oblong; segments of the calyx denticulate on the margin.

HAB. New-York. June. 4. Stem. 6—10 in. high; pedunc. many-fl. ; cor. purple.

6. *L. hirtum*: plant hirsute; floral leaves ovate; stem leaves oblong; calyx with long, lanceolate segments.

HAB. Pennsylvania. 4. Stem 8—12 in. high; fl. in a term. raceme, orange.

136. ONOSMODIUM.

Boraginæ.

1. *O. hispidum*: plant hispid; leaves obovate-lanceolate, papillose-punctate; segments of the corolla subulate.

HAB. Dry hills. Aug. 4. Stem 1—2 ft. high; leav. subtriply nerved; fl. in leafy racemes, white.

2. *O. molle*: whole plant white villose; leaves oblong-oval, somewhat triply nerved; segments of the corolla semi-oval

HAB. Western countries. 4. Resembles the preceding, but has broader segments to the corolla.

137. ECHIUM.

Viper's bugloss.

Boraginæ.

E. vulgare: stem tuberculate hispid; leaves linear-lanceolate, hispid; spikes lateral; stamens longer than the corolla.

HAB. Hill sides. May—July. ♂. Stem 2—3 ft. high; leav. very hispid; spik. secund, recurved; fl. blue.

138. MYOSOTIS.

Scorpion-grass.

Boraginæ.

1. *M. palustris*: leaves lanceolate, a little scabrous with appressed hairs; peduncles divergent when in fruit, twice as long as the 5-toothed spreading calyx; border of the corolla flat, longer than the tube.

HAB. Ditches and rivulets. May—July. 4. Stem a ft. high, slender; racemes long; fl. small, bright blue.

2. *M. arvensis*: leaves oblong-lanceolate, hairy; racemes long; pedicels short, spreading when in fruit; calyx 5-cleft, closed; limb of the corolla erect-spreading, about as long as the tube.

HAB. Sandy woods. June. ☉. Plant gray, simple or branch. 4—8 in. high; fl. small, white.

139. LYCOPSIS. Small Bugloss. *Boraginæ*.

L. arvensis: leaves lanceolate, semiamplexicaul, repand-denticulate, very hispid; racemes leafy; calyx erect.

HAB. Sandy fields. July. ☉. *Very hispid; fl. blue; seeds reticulate.*

140. CYNOGLOSSUM. Hound's tongue. *Boraginæ*.

1. *C. officinale*: leaves broad-lanceolate, attenuate at the base, sessile, downy; stamens included.

HAB. Road sides. June—July. ♂. *Dull green, 1½—2 ft. high; fl. panic., purp.-red; seeds rough.*

2. *C. virginicum*: leaves oval-oblong, acute, hairy; upper ones cordate and amplexicaul at the base; corymb on a long, naked peduncle.

HAB. Moist woods. May. ♀. *Stem 2—3 ft. high, retrorsely hairy; leaves large; fl. blue and white.*

141. ROCHELIA. *Boraginæ*.

1. *R. Lappula*: stem branched above; leaves lanceolate, with incumbent hairs; corolla longer than the calyx; border erect-spreading; seeds with 2 rows of hooked prickles on the margin.

HAB. Road-sides, &c. July—Aug. ☉. *Stem panic. above, 1 ft. high; flowers minute, blue.*

2. *R. virginiana*: leaves oblong-lanceolate, acuminate, scabrous above; racemes divaricate; flowers nodding when in fruit; fruit densely covered with hooked prickles.

HAB. Rocky hills. July. ♂. *Stem 2 ft. high, hairy; leaves large; fl. very small, white.*

142. ANAGALLIS. Pimpernel. *Lysimachiæ*.

A. arvensis: stem procumbent; leaves ovate, sessile, dotted beneath; segments of the corolla dilated, crenate-glandular.

HAB. Sandy fields, &c. June—July. ☉. *Stem quadrang.; leav. oppos.; fl. solitary, axill. scarlet.*

143. LYSIMACHIA. Loosestrife. *Lysimachiæ*.

1. *L. stricta*: raceme terminal, very long, lax; leaves opposite, lanceolate, sessile.

HAB. Low grounds. July—Aug. 4. *Very smooth*; 18 in. high; *axils often bulbif.*; *fl. yell.*

2. *L. quadrifolia*: leaves verticillate, in fours and fives, ovate-lanceolate, acuminate; peduncles axillary, 1-flowered, by fours; segments of the corolla oval, entire, often obtuse.

HAB. Low grounds. June—July. 4. *Stem 12—18 in. high, a little hairy*; *leav. punct.*; *fl. yell.*; *stam. uneq.*

3. *L. ciliata*: stem nearly smooth; leaves opposite, on long petioles, subcordate-ovate, acuminate; petioles ciliate; peduncles subgeminat; flowers nodding.

HAB. Low grounds. July. 4. *Stem 2—3 ft. high*; *leav. large*; *stam. nearly equal, with intermed. teeth.*

4. *L. hybrida*: stem smooth; leaves opposite, petiolate, lanceolate, acute at each extremity; petioles ciliate; flowers nodding; peduncles axillary; corolla cre-nulate.

HAB. Swamps. July—Aug. 4. 18 in. high; *inf. leav. ovate-lan.*; *stam. nearly equal, with intermed. teeth.*

5. *L. longifolia*: stem branched, smooth; leaves opposite, sessile, linear, very long; upper ones in fours; peduncles by fours, subterminal, 1-flowered; segments of the corolla ovate, acuminate, serrulate.

HAB. Wet woods. 4. *Stem 2—3 ft. high*; *leav. 2 lin. broad, flat*; *floral ones verticill.*; *stam. subequal.*

6. *L. capitata*: stem subsimple, punctate; leaves opposite, sessile, broad-lanceolate, punctate; peduncles axillary, elongated; flowers in dense subglobose heads, 6—7-parted.

HAB. Swamps. June. 4. *Stem 18 in. high, terete*; *leav. punct.*; *heads pedunc.*; *stam. 6—7, much exserted.*

7. *L. revoluta*: stem quadrangular, branched; leaves opposite, sessile, long-linear; margin revolute; peduncles 1-flowered, subterminal, nodding.

HAB. Wet calcareous rocks. Aug. 4. *Very smooth*, 12—18 in. high; *leaves 3 in. long, 2 lin. broad*; *anth. very large.*

144. PRIMULA. Primrose. *Lysiniachia*.

P. farinosa & *americana*: leaves obovate spatula-

late, repandly crenate-dentate, pulverulent beneath; umbel many-flowered; peduncles spreading; border of the corolla flat, as long as the tube, with obtuse, obcordate segments.

HAB. Shores of lakes. 4. *Leaves all rad. with a yellowish-green powder beneath; fl. pale purp.*

145. DODECATHEON. American Cowslip.
Lysimachiæ.

1. *D. meadia*: leaves oblong-oval, repandly toothed; umbel many flowered, lax; bracts oval.

HAB. Rocky river sides. May. 4. *Leav. rad., 4 in. long; scape 8—10 in. long; fl. nodding, purp.*

2. *D. integrifolium*: leaves oblong-oval, subspathulate; umbel few-flowered, straight; bracts linear.

HAB. Mountains. 4. *Fl. pale blue, smaller than the preceding.*

146. MENYANTHES. Buck-bean. *Gentianæ.*

M. trifoliata: leaves ternate.

HAB. Swamps. May. 4. *Stem a span high; leaflets obovate; fl. reddish-white, in a pyramidal raceme.*

147. VILLARSIA. *Gentianæ.*

V. lacunosa: leaves reniform, subpeltate, slightly crenate, lacunose beneath; petioles bearing the flowers; corolla smooth.

HAB. In ponds, floating. Aug. 4. *Petioles very long; leav. 1 in. long; fl. subumbellate, white.*

148. HOTTONIA. Water-feather. *Lysimachiæ.*

H. inflata: scape articulate, with the internodes and lower part inflated; flowers verticillate, pedunculate.

HAB. Swamps,—subaquatic. 4. *Stem thick; leav. pectinate; fl. white.*

149. SAMOLUS. Brookweed. *Lysimachiæ.*

S. valerandi: stem erect; leaves obovate; racemes elongated, many-flowered.

HAB. Wet places. June—Oct. 4. *8—10 in. high, smooth; fl. minute, white.*

150. SABBATIA. *Gentianæ*.

1. *S. campanulata*: leaves sublinear; calyx as long as the corolla.

HAB. Wet pastures. *A foot high, terete; fl. subsolitary, purp.; seg. of cal. subulate.*

2. *S. stellaris*: stem terete; branches dichotomous, elongated, 1-flowered; leaves lanceolate, acute; segments of the calyx subulate, half as long as the corolla; segments of the corolla obovate.

HAB. Salt-marshes. Aug. ♂. *A foot high, subangular; fl. rose-col., with a yell. centre.*

3. *S. angularis*: stem quadrangular, somewhat winged; leaves ovate, amplexicaul; peduncles elongated, corymbous; segments of the calyx lanceolate, much shorter than the corolla.

HAB. Moist meadows. Aug. ☉ and ♂. *A foot high, branched; fl. rose-col.; seg. obovate.*

4. *S. calycosa*: stem erect, few-flowered; leaves oblong; flowers solitary, 7—9-parted; calyx foliaceous, longer than the corolla.

HAB. Wet meadows. ♂? *A foot high, very leafy; segments of the cal. lanceol.; fl. rose-col.*

5. *S. chloroides*: stem weak; leaves lanceolate, erect; branches 1-flowered; flowers 7—12-parted; segments of the calyx linear, shorter than the corolla.

HAB. Brackish bog-meadows. Aug. ♂. *Stem 2—3 ft. high; fl. mostly 9-parted, 2 in. in diameter, bright rose-colour.*

6. *S. corymbosa*: leaves ovate, closely sessile; stem acutely angled; flowers corymbous; segments of the calyx subulate, much shorter than the corolla.

HAB. Swamps. Aug.—Sept. ♀. *A foot high; corymb. few-fl.; fl. white, sometimes 4-parted.*

151. HYDROPHYLLUM. Water-leaf. *Boraginæ*.

1. *H. virginicum*: stem nearly smooth; leaves pinnatifid and pinnate; segments oval-lanceolate, with deep serratures; fascicles of flowers conglomerate; peduncles longer than the petioles.

HAB. Woods. May—June. ♀. *Stem 1½ ft. high; leav. 2—3. large; cor. white, with purp. veins.*

2. *H. canadense*: somewhat hairy; leaves angularly

somewhat 5 lobed, remotely serrate; peduncles shorter than the petioles.

HAB. Woods and mountains. June. ♀. *Leav. on long petiol., subcordate; fl. white and purp.*

3. *H. appendiculatum*: very hairy; radical leaves sub-pinnatifid; cauline ones angularly lobed; sinuses of the calyx with minute oval appendages.

HAB. Shady wet rocks. May. ♂. *Almost hispid; fl. subpanic., on short pedunc., blue.*

152. PHACELIA. *Boragineæ.*

1. *P. bipinnatifida*: stem erect; leaves pinnatifid; segments incisely lobed; racemes mostly bifid, oblong, many-flowered; divisions of the corolla entire.

HAB. Mountainous regions. May—June. ♀ ? *Hairy; fl. in term. subsecund racemes, blue.*

2. *P. fimbriata*: stem ascending, hairy; leaves with undivided lobes; segments of the corolla fimbriate.

HAB. Western countries. ♀, ☉. *Racemes short, at first revolute; cal. hispid; fl. blue.*

3. *P. parviflora*: stem diffuse, pubescent; leaves subsessile, pinnatifid; segments oblong, rather obtuse, entire; racemes solitary; pedicels short; segments of the corolla round, very entire.

HAB. Pennsylvania. May. ☉. *Stem 6—8 in. high, slender; fl. pale blue or white; stam. short.*

153. SPIGELIA. *Carolina Pink-root. Gentianæ.*

S. marilandica: stem simple, quadrangular; leaves all opposite, sessile, ovate-lanceolate.

HAB. Woods. June. ♀. *A foot high; fl. fusiform, crimson, in a second terminal raceme.*

154. VERBASCUM. *Mullein. Solanææ.*

1. *V. Thapsus*: leaves decurrent, woolly on both sides; raceme spiked, dense; two of the stamens glabrous.

HAB. Fields, road-sides, &c. June—Aug. ♂. *Stem 3—6 ft. high; fl. bright yellow in very long spikes.*

2. *V. Blattaria*: leaves amplexicaul, oblong, smooth, serrate; peduncles 1-flowered, solitary

HAB. Old fields, &c. June—July. ♂. *2 ft. high, ang.; raceme leafy; pedicels 1 in. long; stam. unequal.*

α. alba: leaves toothed; flowers white.

β. lutea: leaves doubly serrate; flowers yellow.

3. *V. Lychnitis* : leaves oblong-cuneiform, naked above ; stem angular. panicle.

HAB. River banks. ♂. *Leaves very woolly beneath ; fl. pale yellow.*

155. NICOTIANA. Tobacco. Solanææ.

N. rustica : stem terete ; leaves petiolate, ovate, very entire ; tube of the corolla cylindrical, longer than the calyx ; segments round.

HAB. Borders of lakes. ☉. *Viscose-pubes. 1½ ft. high ; fl. in a term. pan., dull greenish-yellow.* ♂

156. HYOSCYAMUS. Henbane. Solanææ.

H. niger : leaves amplexicaul, sinuate ; flowers subsessile ; corolla reticulate.

HAB. Road-sides and rubbish. June. ☉, ♂. *Hispidly-pilose, fœtid ; fl. in recurved spikes, dingy yellow.* ♂

157. CONVULVULUS. Bind weed. Convolvuli.

1. *C. arvensis* : stem climbing ; leaves sagittate, with the lobes acute ; peduncles mostly 1-flowered ; bracts acute, remote from the flowers.

HAB. Fields. ♀. June. *Stem a little hairy ; leav. obtuse ; fl. small, white ; stig. linear.*

2. *C. Sepium* : stem climbing ; leaves sagittate ; very acute ; lobes truncate ; bracts close to the flower, acute, longer than the calyx ; peduncles quadrangular, 1-flowered.

HAB. Hedges and low grounds. June—July. ♀. *Leav. cordate-sagittate ; pedunc. long ; fl. large, white.*

3. *C. panduratus* : stem climbing ; leaves cordate, entire or lobed, panduriform ; peduncles long ; flowers fasciculate ; calyx smooth ; corolla tubular-campulate.

HAB. Sandy fields. ♀. Aug. *Root very large ; stem mostly trailing ; pedunc. 1—4 ft. ; tube of the cor. purp.*

4. *C. spithameus* : stem erect or trailing ; leaves oval or oblong, subcordate, pubescent ; peduncles 1-flowered, generally longer than the leaves.

HAB. Dry woods. June. ♀. *Stem 1—3 ft. long, pubes. ; leav. obtuse or acum. ; bracts large.*

158. IPOMÆA. *Convolvuli.*

1. *I. purpurea*: leaves cordate, entire; peduncles 2—3-flowered; pedicels incrassated, nodding; capsule smooth.

HAB. Cultivated grounds and waste places. July—Aug. ☉. *Stem hairy, twining; cor. large, blue and purp.*

2. *I. lacunosa*: stem smooth; leaves cordate, acuminate, angular at the base; peduncles short, generally 1-flowered; calyx hairy; corolla tubular, short; capsule hairy.

HAB. Pennsylvania. Aug.—Sept. ☉. *Flowers white, with a purp. rim.*

3. *I. Nil*: stem hairy; leaves cordate, 3-lobed; peduncles short, 1—3-flowered; calyx very villous; segments acuminate.

HAB. Hedges and gardens. ☉. *Leaves acum., 3-lobed when old; cor. infund., white at base.*

159. PHLOX. *Polemonia.*

1. *P. paniculata*: stem erect, smooth; leaves lanceolate, flat; corymb paniculate; segments of the corolla rounded.

HAB. Moist meadows. 4. June. *Stem 2—3 ft. high; leav. acum.; cor. purp.; tube pubes.*

2. *P. pyramidalis*: erect, smooth; stem scabrous; leaves cordate-ovate, acuminate; panicle fastigiate, pyramidal; segments of the corolla cuneate; truncate; teeth of the calyx somewhat erect, lanceolate, acute.

HAB. Mountain meadows. Aug. 4. *Stem 2—3 ft. high, spotted with red; fl. purp.; teeth of the cal. short.*

3. *P. maculata*: erect; stem scabrous and spotted; leaves oblong-lanceolate, smooth, scabrous on the margin; panicle oblong, many-flowered; segments of the corolla rounded; teeth of the calyx acute, recurved.

HAB. Rich moist meadows. June. 4. *Stem 2½ ft. high, simp.; upper leav. ovate; fl. pale purp.*

β. *suaveolens*: stem not spotted; corolla white.

4. *P. aristata*: stem erect, weak, viscid-pubescent; leaves linear-lanceolate; panicle lax, fastigiate;

segments of the corolla obovate; tube curved, pubescent; teeth of the calyx very long, subulate.

HAB. Wet meadows. June. 4. Stem $1\frac{1}{2}$ ft. high, villose-pubes.; teeth of the cal. aristate; cor. pale purp. or white.

5. *P. divaricata*: stem low, pubescent, decumbent; leaves oval-lanceolate; upper ones alternate; branches divaricate, loose, few-flowered; segments of the corolla obcordate; teeth of the calyx subulate-linear.

HAB. Rocky banks. July. 4. Stems numerous, 9—12 in. high; fl. in term. pan., blue; cal. erect.

6. *P. reptans*: pubescent, with creeping stolons; radical leaves spatulate-obovate; stem-leaves oval-lanceolate; corymb few-flowered, divaricate; segments of the corolla obovate; teeth of the calyx subulate, reflexed.

HAB. Mountains. June. 4. Stem 6—8 in. high, erect; corymb 4—6-fl.; cal. pubes.; fl. blue.

7. *P. subulata*: cespitose, pubescent; leaves linear-subulate, rigid, ciliate; corymb few-flowered; segments of the corolla cuneate, emarginate; calyx with subulate teeth about as long as the tube of the corolla.

HAB. Rocky hills. April—May. 4. Procumb., branching, 3—4 in. high; lower leav. fascic.; fl. pink.

8. *P. setacea*: cespitose, pubescent; leaves fasciculate, subulate, ciliate, rigid; flowers few, terminal, somewhat umbelled; segments of the corolla cuneate, emarginate; teeth of the calyx subulate, much shorter than the tube of the corolla.

HAB. Rocks and sandy hills. May. 4. Stem as-surgent; leav. longer than No. 7.; fl. pale rose-col.

160. POLEMONIUM. Jacob's-ladder. *Polemonia*.

P. reptans: leaves pinnate; leaflets about 7; flowers terminal, nodding.

HAB. Fertile hills. May 4. Root creeping; stem erect, 1 ft. high; fl. subcorymb., blue.

161. DIAPENSIA. *Convolvuli.*

1. *D. lapponica*: cespitose; leaves spathulate, smooth; flowers pedunculate; anthers simple.

HAB. High mountains. June. 4. *Evergreen, leav. much crowded, a little recurv.; fl. term., white.*

2. *D. barbulata*: creeping; leaves cuneate-lanceolate, pubescent at the base; flowers sessile; anthers beaked at the base.

HAB. Pine barrens and high mountains. May—June. *Evergreen, forming mats; fl. solit., term., white.*

162. DATURA. Thorn-apple. *Solanææ.*

D. Stramonium: capsule spiny, erect; leaves ovate, smooth, angular-dentate.

HAB. Waste-places. July—Sept. ☉. *Stem 2—7 ft. high, dichot., green; fl. solitary, axill., white.*

3. *Tatula*: stem and flowers purple.

163. AZALEA. *Rhododendra.*

A. procumbens.

HAB. High mountains. July. 2. *Evergreen, cespitose, 3—4 in. long; leav. oppos., ellipt.; fl. in small term. umb., rose-col.*

164. PHYSALIS. Ground-cherry. *Solanææ.*

1. *P. obscura*: pubescent; stems prostrate, divaricate; leaves broad-cordate, subsolitary, unequally and coarsely toothed; flowers solitary, nodding; calyx very hairy.

HAB. Woods and hills. Aug. ☉. *Stem forked: leav. on long petioles; fl. pedunc., dull yell.*

2. *P. viscosa*: leaves by pairs, subcordate-oval, repand. obtuse, subtomentose; stem herbaceous, paniculate above; fruit bearing calyx pubescent.

HAB. Road sides, &c. ☉. *Stem erect, 2—3 ft. high, dichot.; fl. yell., spotted at the base.*

3. *P. pennsylvanica*: leaves ovate, subrepand, obtuse, nearly naked; stem herbaceous, branched; peduncles solitary, a little longer than the petioles.

HAB. Road sides and rubbish. July—Sept. 4. *Erect or procumb., 1 ft. high; fl. yell.; not spotted*

1. *P. lanceolata*: leaves geminate, oval-lanceolate, entire, narrowed at the base into a petiole; stem herbaceous, dichotomous; calyx villous.

HAB. Pennsylvania. 4. Stem 1—2 ft. high, densely pubes.; fl. pale yell., spotted.

165. SOLANUM. Nightshade. *Solanæ*.

1. *S. Dulcamara*: stem fruticose, flexuous, without thorns; leaves ovate-cordate; superior ones hastate; corymbs opposite the leaves.

HAB. Low grounds. July—Aug. 2. Climbing; fl. in lateral clusters, violet; berries red.

2. *S. nigrum* *δ. virginianum*: stem herbaceous, without thorns, angular, toothed; leaves ovate, obtusely toothed and waved; flowers subumbelled.

HAB. Old fields, &c. July—Aug. 3. Stem diffuse, slightly winged; fl. white; berries black.

3. *S. carolinense*: stem annual, aculeate; leaves ovate-oblong, tomentose, hastate and sinuate-angular, acuminate; racemes simple, lax.

HAB. Fields. June. 4. Erect, branched, 1 ft. high, armed with yell. prickles; fl. white or pale blue; berries yell.

166. CAMPANULA. Bell-flower. *Campanulæ*.

1. *C. rotundifolia*: glabrous; radical leaves reniform-cordate, crenate; cauline ones linear, entire; panicle lax, few-flowered.

HAB. Rocky river banks. June. 4. Root creeping; stem erect; fl. few, drooping, blue.

2. *C. amplexicaulis*: stem simple, erect; leaves cordate, crenate, amplexicaul; flowers axillary, sessile, glomerate.

HAB. Fields and dry hills. May—July. 3. Stem 8—12 in. high, hispid; leav. veined; fl. purp.

3. *C. americana*: leaves ovate-lanceolate, much acuminate, membranaceous, uncinately serrate; lower ones subcordate, with the petioles ciliate; flowers subsolitary, nearly sessile, in a terminal leafy raceme; corolla subrotate; style exserted.

HAB. Wet rocks. Aug. 4. Stem 2 ft. high, simp.; pedicels short, clavate; fl. blue, flat.

4. *C. acuminata*: nearly smooth; stem straight, erect, leaves lanceolate, attenuated to a long point, subserrate; spike fasciculate, many-flowered; corolla subrotate.

HAB. High mountains. 4. Stem erect, 2—3 ft. high; leav. remotely serrate; fl. by threes, blue.

5. *C. aparanoiides*: stem slender, branched, acutely subtriangular; angles, with the margin and nerves of the leaves, retrorsely aculeate; leaves linear-lanceolate, smooth above; peduncles few, terminal, filiform, flexuous, 1-flowered.

HAB. Wet meadows. June—Aug. ☉. Erect or diffuse, 1 ft. high; leav. dentic. ; fl. small, white.

167. LOBELIA. *Lobeliaceæ*.

1. *L. Dortmanna*: leaves linear, fleshy, 2-celled, obtuse; scape nearly naked; flowers racemed, remote.

HAB. Swamps.—subaquatic. July. 4. Leaves immersed: radical ones spreading; scape long, 3—4 ft; cor. blue.

2. *L. Kalinii*: whole plant smooth; stem slender, erect, branched; leaves linear, remotely denticulate; radical ones spatulate; raceme lax, few-flowered, leafy; peduncles longer than the fruit, with 2 minute bracts near the flower; capsule attenuate at the base.

HAB. Rocky banks of rivers. July—Aug. ♂? Stem 12—18 in. high; pedunc. 1 in. long; fl. pale blue.

3. *L. Nuttallii*: stem erect, minutely scabrous, simple, or with filiform branches; leaves oblong-linear, denticulate; flowers in slender racemes, distant; peduncles coloured, shorter than the flower, with minute bracts near the base; capsule obtuse below.

HAB. Borders of sandy swamps. Aug. ♂. Stem slender, 2 ft. high; seg. of the cal. longer than the caps. ; fl. pale blue.

4. *L. Claytoniana*: stem erect, simple, pubescent; leaves oblong, pubescent, obtuse, nearly entire; radical ones spatulate; raceme virgate, naked;

segments of the calyx subulate; nearly as long as the tube of the corolla.

HAB. Dry woods and fields. Aug. 24. Stem $1\frac{1}{2}$ —2 ft. high; rad. leav. nearly entire; fl. pale blue.

5. *L. puberula*: pubescent; stem erect, simple; leaves oblong-oval, obtuse, repand-serrulate; spike secund, leafy at the base; segments of the calyx longer than the tube of the corolla, ciliate.

HAB. Mountains. Sept. 4. Stem 2 ft. high; rad. leav. obovate; sinuses of the cal. reflexed; fl. large, blue.

6. *L. siphilitica*: stem erect, rather hairy; leaves ovate-lanceolate, unequally serrate; raceme leafy; calyx hairy, with the sinuses reflexed.

HAB. Wet meadows. Sept. 4. Stem $1\frac{1}{2}$ —2 ft. high; fl. on short pedic., large, bright blue.

7. *L. inflata*: stem hairy, branched; leaves ovate-lanceolate; racemes leafy, somewhat paniculate; capsules inflated.

HAB. Fields. Aug. ☉. *Acrid*, a foot or more high; leav. crenate; fl. pedunc., small, pale blue.

8. *L. Cardinalis*: stem erect; leaves oblong-lanceolate, serrate; raceme secund, somewhat leafy; stamens longer than the corolla.

HAB. Wet grounds. July—Aug. 24. 2 ft. high, very smooth; fl. large, bright scarlet.

168. DIERVILLA. *Caprifolia*.

D. *Tournefortii*.

HAB. Rocky woods. June. ♀. Shrub 2—3 ft. high, branched; leav. oppos., ovate, acum., serrate; pedunc. axill., 2—3-fl.; cor. yell.

169. LONICERA. Honey-suckle. *Caprifolia*.

1. *L. hirsuta*: spikes verticillate, terminal, subcapitate, glandular-pubescent; leaves broad-ovate and obovate, pubescent and ciliate, glaucous beneath; upper ones connate-perfoliate, nearly smooth.

HAB. Rocky woods. June ♀. Climbing; leav. decid., nearly sess., sometimes almost smooth; fl. yell., pubes.; berries orange, glandular-pubes.

2. *L. flava*: spikes verticillate, capitate, terminal; corolla somewhat ringent; segments oblong, obtuse; leaves ovate, glaucous beneath, with a cartilaginous margin; upper ones connate-perfoliate.

HAB. Mountains. June—July. h_2 . Climbing; leav. decid., smooth, veined; fl. bright yell.; tube hairy.

3. *L. parviflora*: spikes verticillate, capitate; leaves deciduous, glaucous beneath, all of them connate-perfoliate; corolla ringent, gibbous at the base; filaments bearded.

HAB. Rocky places. June. h_2 . Climbing; glaucous, leav. ovate or oblong; fl. yell.; berries red.

5. *L. grata*: flowers verticillate, terminal; leaves perennial; obovate, glaucous beneath; upper ones connate-perfoliate.

HAB. Swamps and mountains. h_2 . Climbing or erect; fl. inclining to scarlet, ringent; berries red.

5. *L. sempervirens*: spike somewhat naked, verticillate, terminal; leaves oblong, glaucous beneath; upper ones connate-perfoliate; corolla nearly equal, with the tube above ventricose.

HAB. Dry stony woods. May—Aug. h_2 . Evergreen; leav. a little hairy above; fl. crimson; berries scarlet.

170. XYLOSTEUM. *Caprifolia*.

1. *X. ciliatum*: leaves ovate and subcordate, ciliate; the younger ones villous beneath; tube of the corolla calcarate at the base, ventricose above; segments short, acute; style exserted.

HAB. Mountains. May—June. h_2 . 3—4 ft. high; branch spreading; leav. on short pet.; fl. axill., yell.

2. *X. villosum*: berries coadunate; leaves oblong and oval, obtuse; the younger ones, with the corolla, villous; peduncles much shorter than the flower.

HAB. Mountain swamps. May. h_2 . 2—4 ft. high; young branch. vill.; fl. axill., yell.; berries red or purp.

171. SYMPHORIA. Peter's-wort. *Caprifolia*.

1. *S. glomerata*: racemes axillary, capitate, conglomerate.

HAB. Pennsylvania. Aug. h. 3—4 ft. high; bran. erect, pubes.; leav. oppos., ovate, entire; fl. greenish-red, small; berries purp.

2. *S. racemosa*: racemes terminal; corolla bearded within.

HAB. Rocks. July. h. 2—3 ft. high, branched; fl. small, pale red; berries large white.

172. TRIOSTEUM. Fever-wort. *Caprifolia*.

T. perfoliatum: leaves oval, acuminate, abruptly narrowed at the base, connate, pubescent beneath; axils 1—3-flowered.

HAB. Rocky woods. June. h. 2—3 ft. high; leav. large; fl. sess., dull purp.; berries orange.

173. ITEA. *Saxifrageæ*.

I. virginica.

HAB. Swamps. June. h. 4—8 ft. high; leav. altern., lanceol., acum., serrul.; fl. in simp. term. racemes, white, pubes. within.

174. IMPATIENS. Balsam. *Papaveraceæ*.

1. *I. pallida*: peduncles solitary, 3—4-flowered; nectary obtusely conic, dilated, shorter than the petals; spur recurved, very short; flowers sparingly punctate; leaves rhombic-ovate, mucronately toothed.

HAB. Wet shady places. Aug. ☉. Stem 2 ft. high, tender and succul.; leav. altern.; fl. yell.; seeds ellip.

2. *I. fulva*: peduncles solitary, 3—4-flowered; nectary acutely conic, longer than the petals; spur resupinate, emarginate, nearly as long as the galea; flowers with crowded spots; leaves rhombic-ovate, obtuse, mucronate toothed.

HAB. Wet shady places. Aug. ☉. Plant glauc. and diaph.; caps. 5-ang., 3—5-seeded; seeds prismatic.

175. VIOLA. Violet. *Violaceæ*.

* Stemless.

† Flowers blue.

1. *V. pedata*: leaves pedate, nearly smooth, about 7-

parted ; segments linear-lanceolate, entire ; stigma large, obliquely truncate, and perforate at the apex.

HAB. Rocky hills and dry woods. May. 4. *Leav. with obtuse seg. ; stip. ciliate ; fl. large, pale blue.*

2. *V. palmata* : pubescent ; leaves cordate, (rarely entire,) palmate, or hastate-lobed ; lobes crenate and toothed, the middle one much the largest ; 2 lateral petals bearded ; stigma margined, depressed.

HAB. Low grounds. May. 4. *Leaves never smooth ; stip. lan. ; fl. middle sized ; stig. rostrate.*

3. *V. sagittata* : leaves oblong, acute, cordate-sagittate, incised at the base ; flowers inverted ; inferior petal bearded, the rest bearded.

HAB. Hills and fields. April—May. 4. *Leav. pubes. above ; stip. lin. ; fl. middle-sized, purp. ; spur short.*

3. *emarginata* : leaves almost triangular, lacerately toothed near the base ; petals emarginate or bidentate.

HAB. Sandy fields and river-banks.

4. *V. ovata* : leaves ovate, subcordate, crenate, often lacerately toothed at the base, pubescent on both sides ; petiole margined ; segments of the calyx oblong-lanceolate, hairy.

HAB. Dry hills. April—May. 4. *Leav. generally almost woolly ; fl. middle-sized ; stig. recurv., rost.*

5. *V. cucullata* : very smooth ; leaves cordate, cucullate at the base, serrate ; stipules linear ; inferior and lateral petals bearded.

HAB. Wet meadows. April—May. 4. *Leav. subrenif., on long petioles ; beard of the pet. rigid.*

6. *V. obliqua* : smooth ; leaves cordate, acute, flat, crenate-serrate ; flowers obliquely bent ; lateral petals bearded ; inferior ones acute, carinate ; stipules lanceolate.

HAB. Wet meadows. 4. May. *Scape long, with minute bracts ; beard of the petals globose-clavate.*

7. *V. villosa* : leaves reniform-cordate, flat, very pubescent ; segments of the calyx auriculate at the base ; stigma deflexed ; margin cupuliform.

HAB. Rocky hills. 4. May. *Leav. spreading on the ground, purp. beneath ; pet. oblong.*

3. *cordata* : leaves cordate, rather acute ; segments of the calyx scarcely produced at the base.

HAB. Hills and dry woods. April—May. 4. *Leav. thickish, smooth below ; sinus small.*

† † *Flowers yellow.*

8. *V. rotundifolia* : leaves orbicular-ovate, cordate, slightly crenate, nearly smooth ; sinus closed ; petiole pubescent ; lateral petals bearded ; segments of the calyx obtuse ; spur nearly obsolete.

HAB. Shady rocky woods. May. 4. *Leav. appress. to the earth, on short pet. ; pet. broad-ovate, striate.*

† † † *Flowers somewhat regular, small, white.*

9. *V. lanceolata* : leaves very smooth, lanceolate, attenuated into a petiole at the base, rather obtuse, subserrate ; petals beardless.

HAB. Wet meadows. April—May. 4. *Leav. 2—4 in. long, very narrow ; fl. inodorous, veined.*

10. *V. acuta* : leaves ovate lanceolate, smooth, abruptly decurrent at the base ; bracts lanceolate-linear ; petals acute, of nearly equal length, beardless.

HAB. Moist grounds. May. 4. *Leav. rarely subcord. ; pet. ovate, lowest one veined.*

11. *V. primulifolia* : leaves oblong, subcordate, abruptly decurrent on the petiole ; nerves beneath, and the scape, subpubescent ; lateral petals bearded.

HAB. Wet meadows. April—May. 4. *Leav. more or less obtuse ; fl. odorous ; pet. obovate.*

12. *V. blanda* : leaves broad-cordate, slightly pubescent above ; sinus rounded ; petiole smooth ; flowers beardless.

HAB. Wet grounds. April—May. 4. *Leav. nearly flat, membran., often subrenif. ; fl. odorous.*

13. *V. clandestina* : leaves orbicular, rather obtuse, smoothish, crenate-serrate, with glandular serratures ; sinus closed, cordate ; stolons floriferous ; petals linear, scarcely longer than the calyx.

HAB. Mountains. June—Sept. 4. *Leaves large, thin; scape very short; fl. concealed. A var. of No. 12?*

* * *Caulescent.*

14. *V. canadensis*: nearly smooth; leaves cordate, acuminate, serrate; peduncles shorter than the leaves; petals oblong, narrow; stipules ovate-lanceolate, entire.

HAB. Moist rocky woods. May—July. 4. *Stem 6—18 in. high, erect, simp.; fl. large, blue.*

15. *V. ochroleuca*: stem somewhat erect, branched, smooth; leaves round-cordate; upper ones a little acuminate; stipules oblong-lanceolate, dentate-ciliate; stigma tubular, recurved, pubescent at the summit.

HAB. Wet grounds. May. 4. *Stem 6—8 in. long; fl. yellowish-white, large; pet. obtuse.*

16. *V. Muhlenbergii*: stem weak, assurgent; leaves reniform-cordate; the upper ones a little acuminate, crenate-serrate, smooth; stipules lanceolate, serrate-ciliate; nectary produced; stigma tubular, rostrate.

HAB. Swamps. May. 4. *Stem 6—10 in. long, branch. below; bracts alternate; fl. blue.*

17. *V. rostrata*: smooth; stem diffuse, erect; leaves cordate, the upper ones acute, serrate; stipules lanceolate, serrate-ciliate; petals beardless; nectary longer than the corolla.

HAB. Wet rocky places. April—May. 4. *Stem 6 in. high; pedunc. long; fl. large, blue; stig. subclavate.*

18. *V. pubescens*: villous pubescent; stem erect, naked below; leaves broad-cordate, toothed; stipules ovate, subdentate.

HAB. Dry stony woods. April—May. *Stem simp., 6—8 in. high, bracteate; leav. 2—3; fl. yellow.*

β. eriocarpa: capsule densely villous.

19. *V. hastata*: smooth; stem simple, leafy above; leaves hastate, on very long petioles; stipules minute, ciliate-denticulate.

HAB. Mountains. May. 4. *Erect*, 6—8 in. high; *leav. acum.*; *fl. yell.*; *inf. pet. large, sub-3-lobed.*

20. *V. tenella*: stem triquetrous; leaves rotund-spathulate; superior ones lanceolate, entire; stipules large, pinnatifid.

HAB. Dry rocky hills. May. ☉. *Stem* 2—3 in. high; *rad. leav. petiolate*; *fl. small, bluish-white.*

21. *V. concolor*: stem straight, erect; leaves cuneate-lanceolate; stipules lanceolate-entire; peduncles very short, 2—3-flowered; petals connivent, emarginate; spur 0.

HAB. Wet shady rocks. April—May. 4. *Stem simp., ang., 1 ft. high*; *leav. erect*; *fl. greenish, small.*

176. CLAYTONIA. *Portulacæ.*

C. virginica: leaves linear-lanceolate; petals obovate, retuse; leaves of the calyx somewhat acute; root tuberous.

HAB. Moist woods. April—May. 4. *Smooth, erect or procumb.*; *leav. few, oppos.*; *fl. racem., rose-col.*

β. *latifolia*: leaves ovate-lanceolate; leaflets of the calyx obtuse.

HAB. Mountainous districts.

177. CEANOTHUS. New-Jersey tea. *Rhamni.*

1. *C. americanus*: leaves ovate-oblong, serrate, triply-nerved, tomentose-pubescent beneath; panicles axillary, on long peduncles.

HAB. Woods and copses. July. ½. *Root large, red*; *stem 2—4 ft. high*; *leav. alt.*; *fl. minute, white.*

2. *C. herbaceus*: leaves oval, subserrulate, smooth; panicle thyrsoid, axillary and terminal.

HAB. Rocky banks. *Suffruticose*; *leaves as large as in the preceding.*

178. EUONYMUS. Spindle-tree. *Rhamni.*

1. *E. americanus*: branches smooth, quadrangular; leaves subsessile, elliptical-lanceolate, smooth, acute, serrate; peduncles 3-flowered, terete; flowers 5-cleft; fruit verrucose-muricate.

HAB. Shady woods. June. *Shrub 3—4 ft. high*; *bran. oppos., spread.*; *fl. axill., greenish*; *fruit scarlet.*

β. sarmentosus: stem sarmentose.

HAB. Rocky moist forests. July. *Subsempervirent*, 2 ft. high, *acutely quadrang.*

2. *E. atropurpureus*: leaves perfoliate, oblong-lanceolate, acuminate, serrate; peduncles divaricate, many-flowered; flowers 4-cleft; fruit smooth.

HAB. Shady woods. June. *Shrub* 4—5 ft. high; *pedunc.* 3—6-fl.; *pet. dark-purp.*; *fruit bright-red.*

3. *E. obovatus*: stem prostrate, rooting; surculi erect, obtusely quadrangular, with 4 elevated lines; leaves broad-ovate, obtuse, acute at the base, sessile, acutely serrulate; peduncles 3-flowered; stamens 4—5.

HAB. Shady fir swamps. June. *h.* *Nearly simp.*; *leav. often dilated*; *fl. purplish-green.*

179. CELASTRUS. Staff-tree. *Rhamni.*

C. scandens: stem climbing, unarmed; leaves oblong, acuminate, serrate; racemes terminal; flowers dioecious.

HAB. Woods and thickets. June. *h.* *Leav. altern.*, *stipul.*; *racem. few-fl.*; *pet. greenish-yel.*; *fruit red.*

180. RHAMNUS. Buck-thorn. *Rhamni.*

1. *R. alnifolius*: unarmed; leaves oval, acuminate, serrulate, pubescent on the nerves beneath; flowers dioecious; peduncles 1-flowered, aggregate; calyx acute; fruit turbinate.

HAB. Rocky hills. May. *Shrub small*; *leav. altern.*; *fl. small, greenish, in axill. fascic.*; *fruit black.*

2. *R. catharticus*: spikes terminal; flowers generally 4-cleft, polygamo-dioecious; leaves ovate; stem erect; berries 4-seeded.

HAB. Mountains and woods. May. *A small tree*; *leav. fascic. and oppos.*; *fl. clust., axill.*; *fruit black.*
§?

181. VITIS. Vine. *Vites.*

1. *V. Labrusca*: leaves broad-cordate, angularly sub-3-lobed, cinereous-tomentose beneath; racemes small; berries large.

HAB. Woods and hedges. June—July. *h.* *Leav. very large, at first ferrug. beneath*; *fl. greenish*; *fruit purp.*

2. *V. vulpina*: leaves cordate, acuminate, incisely toothed, smooth on both sides; racemes loose, many-flowered; berries small.

HAB. Woods and river-banks. June. $\bar{h}$. *Leav.* 3—4 in. broad; veins a little pubes.; fruit sm., amber-col.

3. *V. æstivalis*: leaves broad-cordate, 3—5-lobed, ferruginous-tomentose beneath; sinuses rounded; racemes oblong; berries small.

HAB. Rocky river-banks. June. $\bar{h}$. *Leav.* smoothish when old; fruit deep blue or purp.

β . *sinuata*: leaves sinuate-palmate.

4. *V. riparia*: leaves unequally incisely toothed, short 3-lobed, pubescent on the margin, nerves and petiole.

HAB. Gravelly shores. $\bar{h}$. *Fl.* very sweet scented.

182. CISSUS. *Vites*.

1. *C. hederacea*: stem climbing and rooting; leaves quinate-digitate, smooth; leaflets petiolate, oblong, acuminate, toothed; racemes cymose, dichotomous; nectary 0.

HAB. Woods. July. $\bar{h}$. *Leav.* on long pet.; fl. greenish; ber. small, dark-blue, acid.

3. *hirsuta*: leaves pubescent on both sides; leaflets ovate, acuminate, coarsely toothed.

HAB. Mountains.

2. *C. Ampelopsis*: leaves cordate, acuminate, toothed and angular; nerves beneath pubescent; racemes twice bifid.

HAB. River banks and mountains. $\bar{h}$. Climbing; leav. petiol.; raceme few-fl.; ber. pale-red.

183. RIBES. Currant and Gooseberry.

Grossulariæ.

* *Stems without thorns.*

1. *R. floridum*: unarmed; leaves punctate both sides, acutely 3-lobed, pubescent; racemes pendulous; calyx tubular; bracts longer than the pedicels.

HAB. Woods and hedges. $\bar{h}$. April—May. *Shrub* 3—4 ft. high; fl. greenish; ber. black.

2. *R. albinervium*: leaves short, acutely lobed, smoothish; nerves white; racemes recurved; berries smooth.

HAB. Mountains. April—May. $\frac{1}{2}$. *Fl. small, greenish yell. ; ber. red.*

3. *R. trifidum*: leaves moderately lobed, smooth above, pubescent beneath; racemes loose, pubescent; flowers rather flat, with the segments of the calyx subtrifid; petals spathulate, obtuse; berries hairy.

HAB. Mountains. April—May. $\frac{1}{2}$. *Leav. with subacute lobes; pet. purp. ; ber. red.*

4. *R. rigens*: branches straight; leaves acutely lobed and dentate, reticulate-rugose, pubescent beneath; racemes rather loose, many-flowered, becoming stiffly erect; berries hispid.

HAB. Mountains. May. $\frac{1}{2}$. *Leav. on long pet. ; raceme 6—10-fl. ; fl. purp. ; ber. red.*

5. *R. prostratum*: branches reclined-prostrate; leaves lobed, smoothish; the younger ones pubescent; branches somewhat erect; calyx rather flat; petals deltoid; bracts minute; berries hispid.

HAB. Mountains. May. $\frac{1}{2}$. *Shrub small; leav. 5-lob. ; raceme erect, 8—10-fl., gland. ; ber. red.*

* * *Stems thorny.*

6. *R. hirtellum*: spines subaxillary; branches somewhat hispid; leaves small, half 3-cleft; lobes subdentate; peduncles 1-flowered; berries smooth.

HAB. Mountains. May—June. $\frac{1}{2}$. *Berries red.*

7. *R. gracile*: spines subaxillary; leaves on slender petioles, pubescent on both sides; lobes acute, dentate, incised; peduncles slender, erect, about 2-flowered; calyx tubular-campanulate; berries smooth.

HAB. Mountains. May. $\frac{1}{2}$. *Spines mostly solitary; pet. short, white; ber. green or purp., sometimes with several spines.*

8. *R. triflorum*: spines subaxillary; leaves smooth. 3—5-lobed, incisely toothed; peduncles about 3-flowered; pedicels elongated; bracts very short; petals spathulate, undulate; style hairy, exserted, deeply 2-cleft; berries smooth.

- HAB. Mountains. May. $\bar{h}$. *Branch. spreading; spines sometimes 0; fl. purp.-green; ber. small, red.*
9. *R. oxycanthoides*: larger spines subaxillary; smaller ones scattered over the stem; leaves smooth; lobes dentate; peduncles short, about 2-flowered; berries smooth.
- HAB. Rocks. $\bar{h}$. *Bran. slend.; leav. sub-3-lobed; fl. solit. or in pairs, pale yell.; ber. purp., glob.*
10. *R. lacustre*: subaxillary spines compound; stem on every part hispid-aculeate; leaves lobed beyond the middle; petioles villous; berries racemose, hispid.
- HAB. Mountain swamps. June. $\bar{h}$. *Stem reddish; leav. 5-lob.; racem. pend., 5—6-fl.; pet. white; ber. brown.*
11. *R. Cynosbati*: subaxillary spines by pairs; leaves with short lobes, incisely toothed, softly pubescent; racemes nodding, few-flowered; calyx erect-campanulate; berries aculeate.
- HAB. Mountains. Apr.—June. $\bar{h}$. *Fl. green; ber. dark brown.*

184. HAMILTONIA. Oil-nut. *Santalaceæ*.

H. oleifera.

HAB. Mountains, near rivulets. May—June. *Shrub 4—6 ft. high, very pubes.; leav. altern., ovate, entire; fl. greenish, racemose; nut oily.*

185. THESIUM. Bastard toad-flax. *Santalaceæ*.

T. umbellatum: stem erect; leaves oval-lanceolate; fascicles of flowers terminal, subcorymbed.

HAB. Rocky hills and woods. July—Aug. $\bar{h}$. *Stem 1 ft. high; leav. altern., entire; fl. white.*

186. ANYCHIA. *Illecebreæ*.

A. dichotoma: stem erect or spreading, dichotomously branched; leaves lanceolate, smooth, acute; flowers about as long as the stipules.

HAB. Dry woods and hills. June—Aug. ☉. *Stem filif., pubes. above; leav. oppos.; fl. solit., very minute.*

3. *capillacea*: very smooth; flowers spreading, longer than the stipules at their base.

HAB. Pine-barrens. Aug. *A span high; leav. smaller, often obtuse.*

GLAUX. Black Salt-wort. *Primulaceæ.*

G. maritima.

HAB. Sea-coast. 4. *Erect, 4—5 in. high; leav. oppos., ovate, fleshy; fl. small, solit., axill., rose-col.*

DIGYNIA.

188. APOCYNUM. Dog's-bane. *Apocineæ.*

1. *A. androsaemifolium*: leaves ovate, smooth on both sides; cymes lateral and terminal, smooth; tube of the corolla longer than the calyx.

HAB. Fields and hedges. June—July. 4. *Stem 2—3 ft. high; branch. spread.; fl. pink; border spreading.*

2. *A. pubescens*: stem erect; leaves ovate, hoary-pubescent beneath; cymes pubescent; corolla longer than the calyx; border erect.

HAB. Borders of fields. June—July. 4. *Branch. few, erect; petiol. short.; fl. few, sm., greenish.*

3. *A. hypericifolium*: leaves oblong, smooth, on very short petioles, mucronate, obtuse and subcordate at the base; cymes shorter than the leaves; calyx nearly as long as the tube of the corolla.

HAB. Fields and borders of woods. June—July. 4. *Leav. subsess., very acute; cor. small, greenish-white, erect.*

4. *A. cannabinum*: leaves lanceolate, acute at each end, smooth on both sides; cymes paniculate; calyx as long as the tube of the corolla.

HAB. Fields and borders of woods. June. 4. *Branch. slend.; cym. many-fl.; cor. small, campan.. greenish.*

189. PERIPLOCA. *Apocineæ.*

P. græca: flowers hairy within, terminal.

HAB. New-York. Aug. 2. *Climbing; leav.*

oppos., ovate, acuminate; *fl.* corymb. dark purp.;
seg. linear. §. ?.

190. GONOLOBUS. *Apocineæ*.

1. *G. obliquus*: stem climbing, hairy; leaves ovate-cordate; villous, acute; corymbs axillary; segments of the corolla ovate, acuminate, oblique, revolute.

HAB. Moist rocks. July. 4. *Leav.* veined; *corymbs* short; *fl.* fœtid, dark-purp.

2. *G. hirsutus*: sarments and petioles very hairy; leaves cordate-oval, distinctly acuminate, pubescent on both sides; segments of the corolla oblong, obtuse; follicles oblong, muricate.

HAB. Hedges, near rivulets. 4. *Trailing or climbing*; *umb.* 4—6-*fl.*; *pet.* dark-purp.; *fol.* with soft spines.

191. ASCLEPIAS. Silk-weed. *Asclepiadææ*.

* *Leaves opposite.*

1. *A. syriaca*: stem subsimple; leaves lanceolate-oblong, petiolate, tomentose beneath; umbels nodding; nectary bidentate; follicles muricate.

HAB. Sandy fields, &c. July—Aug. 4. *Stem* 2—4 ft. high; *umb.* 2—3, 15—20-*fl.*; *fl.* large, pale-purp.

2. *A. phytolaccoides*: stem erect, simple; leaves broad-lanceolate, acuminate, smooth, pale beneath; umbels many-flowered, lateral and terminal, solitary, on long peduncles, nodding; nectary bidentate.

HAB. Shady wet places. June—July. 4. *Stem* 3—4 ft. high; *leav.* large; *umb.* 6—10-*fl.*; *fl.* greenish-purp.

3. *A. variegata*: stem simple, erect; leaves ovate, petiolate, smooth; umbels lateral and terminal, on short peduncles, crowded; pedicels tomentose; horn broad-falcate.

HAB. Woods. July. 4. *Stem* 3—4 ft. high, *pubes.* above; *umb.* mostly 2, 20—30-*fl.* white, rarely purplish.

4. *A. obtusifolia*: leaves amplexicaul, oblong, obtuse, undulate, very smooth, glaucous beneath; umbel

terminal, long-pedunculate, generally solitary ; nectary slightly 2-toothed ; horns exserted.

HAB. Sandy fields and hills. June—July. 4. *Stem 2—3 ft. high ; leav. remarkably undulate ; fl. pale-purp.*

5. *A. laurifolia* : stem erect, smooth ; leaves subsessile, oval-lanceolate, tapering to the summit, very acute, smooth ; umbels on long peduncles, terminal and axillary.

HAB. Pennsylvania. Aug. 4. *Stem 2 ft. high ; summit pubes. ; leav. obtuse at base ; fl. green and purp.*

6. *A. incarnata* : stem erect, branched above, tomentose, leaves subsessile, lanceolate, tomentose, umbels erect, generally by pairs ; nectary entire ; horns subulate, exserted.

HAB. Wet places. 4. *Stem 2—3 ft. high ; umb. num., crowd. ; fl. pale-purp. ; nect. truncate.*

7. *A. pulchra* : stem and leaves very hairy.

8. *A. amœna* : stem with 2 longitudinal pubescent lines ; leaves subsessile, oblong-oval, pubescent beneath ; umbels terminal, erect ; nectary entire ; horn subulate, exserted.

HAB. Swamps and wet meadows. July—Aug. 4. *Stem 3 ft. high, nearly smooth ; umb. many-fl., purp.*

9. *A. purpurascens* : stem simple ; leaves ovate, villous beneath ; umbels erect ; leaflets of the nectary resupinate.

HAB. Wet places. 4. *Stem 1½ ft. high, hairy above ; leav. on short pet. ; fl. purp.*

10. *A. debilis* : very smooth ; stem erect, weak, simple ; leaves petiolate, oval-lanceolate, acute at each extremity, membranaceous ; umbels terminal, loose.

HAB. Shady rocky places. 4. *Leaves large ; flowers white.*

11. *A. acuminata* : stem erect, smooth, simple ; leaves ovate, subcordate, acuminate, subsessile ; umbels lateral, solitary, erect ; nectary acute ; horns scarcely exserted.

HAB. Sandy swamps. Aug. 4. *Root large, tub. ; stem 18 in. high ; umb. 2 ; fl. purp. and green.*

11. *A. quadrifolia*: stem erect, simple, smooth; leaves by fours, ovate, acuminate, petiolate; umbels 2, terminal, erect, loose; pedicels capillary; nectary bidentate; horn very short.

HAB. Dry stony woods. June. 4. Stem 18 in. high; leaves mostly 8; 2 middle pairs approx.; umb. on long pedunc.; fl. small, white.

12. *A. viridiflora*: stem erect, simple, hairy; leaves oblong, on short petioles, tomentose-pubescent on both sides, obtuse; umbels lateral, solitary, subsessile, nodding, dense; horns of the nectary wanting.

HAB. Sandy fields. July. 4. Stem 2 ft. high, densely pubes.; leav. thick; umb. subglob.; fl. green.

β. *lanceolata*: leaves lanceolate, acute.

γ. *obovata*: leaves obovate.

13. *A. verticillata*: stem simple, marked with pubescent lines; leaves mostly verticillate, narrow-linear, revolute; nectaries short, bidentate; horns falcate, much exserted.

HAB. Dry hills. July. 4. Stem about 3 ft. high, very slender.; whorles 5—6 leav.; fl. small, whitish.

* * Leaflets alternate.

14. *A. tuberosa*: stem erect, hairy, with spreading branches; leaves oblong-lanceolate, sessile; umbels numerous, forming terminal corymbs.

HAB. Sandy fields. Aug. 4. Root, large, tub.; stem 3 ft. high; fl. large, bright orange.

192. GENTIANA. Gentian. *Gentiana*.

1. *G. Saponaria*: leaves ovate-lanceolate, acute, 3-nerved; flowers verticillate-capitate, sessile; corolla ventricose, closed, 10-cleft; interior segments unequally 3-cleft, as long as the exterior ones; segments of the calyx ovate, shorter than the tube.

HAB. Wet meadows. Sept.—Oct. 4. Stem 18 in. high, simp.; leav. oppos.; fl. very large, bright blue.

2. *G. ochroleuca*: stem subangular; leaves ovate-lanceolate; flowers in terminal subsessile fascicles; segments of the calyx linear-lanceolate; corolla campanulate-ventricose, 10-cleft; segments acute, slightly connivent; interior ones subdentate, short.

HAB. Fields and woods. Sept. 4. *Stem 1 ft. high, subsulc.; fl. large, yellowish-white.*

3. *G. Pneumonanthe*: stem terete; leaves linear-lanceolate, obtuse; flowers few, terminal, (and axillary,) subsessile; segments of the calyx linear-oblong, rather acute; corolla campanulate, 5-cleft; segments acute; interior plaits short, 1-toothed.

HAB. High mountains. 4. *Stem a foot high, very smooth; fl. large, bright blue.*

4. *G. angustifolia*: stem simple, slender, 1-flowered; leaves linear, spreading; corolla infundibuliform, 5-cleft, with 5 interior lacerate segments.

HAB. Sandy fields. Oct.—Nov. 4. *Stem 1 ft. high, slend.; leav. long; fl. 2 in. long, azure-blue.*

5. *G. linearis*: stem somewhat scabrous; leaves linear-lanceolate, undulate, ciliate, as are also the segments of the calyx; flowers sessile, in terminal crowded fascicles; corolla campanulate, 5-cleft; segments obtuse, with the interior folds denticulate.

HAB. Mountains. 4. *Fl. middle-sized, blue; seg. of the cor. very short.*

6. *G. quinqueflora*: stem quadrangular, branched; leaves ovate-lanceolate, acute, 3-nerved; flowers somewhat in fives, terminal and axillary, pedicellate; corolla tubular-campanulate, 5-cleft; segments setaceously acuminate; calyx very short.

HAB. Woods and hill sides. Sept.—Oct. ♂. *Stem 1 ft. high, rarely simp.; fl. small, pale blue.*

7. *G. crinita*: stem terete; branches elongated, 1-flowered; leaves lanceolate, acute; corolla half 4-cleft; segments incisely ciliate.

HAB. Wet meadows. Oct.—Nov. ♂. *Stem 18 in. high, quadrang. above; fl. very large, blue.*

193. CUSCUTA. Dodder. *Convolvuli*.

1. *C. americana*: flowers pedunculate, umbellate, 5-cleft; stigmas capitate; corolla tubular-campanulate, with the border small and spreading.

HAB. Low grounds. June—Aug. ☉. *Stems filif., orange, parasit., twining; fl. in dense clust.*

2. *C. europæa*: flowers sessile; corolla 4—5-cleft, without scales at the base of the stamens; stigmas simple.

HAB. Parasitic on flax. July. ☉. *Stems filif., red, twining; fl. yell., campan.*

194. HEUCHERA. Alum. *Saxifragæ.*

1. *H. americana*: viscidly-pubescent; scape and leaves a little scabrous; leaves with rounded lobes, dentate; teeth dilated, obtuse, mucronate; panicle dichotomous; calyx short, obtuse; petals lanceolate, as long as the calyx.

HAB. Shady rocky places. June—July 4. *Leav. rad. on long pet.; scape 2—3 ft. long.; fl. purp.*

2. *H. pubescens*: pulverulent-pubescent; scape smooth below; leaves somewhat acutely lobed, smooth beneath, toothed; teeth rounded, mucronate; peduncles short, with crowded flowers; calyx large, campanulate; petals longer than the calyx; stamens scarcely exerted.

HAB. Mountains. 4. *Leav. with broad teeth; scape 2 ft. long, scab above; pet. red and yell.*

195. PANAX. Ginseng. *Araliæ.*

1. *P. trifolium*: leaves ternate; leaflets subsessile; styles 3; berry trilocular; root globose.

HAB. Moist woods. April—May. 4. *Root tub.; stem 4—8 in. high; leaflet. oblong-lan.; fl. white; ber. green.*

2. *P. quinquefolium*: leaves in threes; leaflets quinate, petiolate; peduncles shorter than the petioles; root fusiform.

HAB. Mountains. July. 4. *Root long, wrinkled; stem 1 ft. high; fl. greenish; ber. renif., scarlet.*

196. ATRIPLEX. Orache. *Chenopodææ.*

1. *A. hortensis*: stem erect, herbaceous; leaves triangular, dentate, green on both sides; fructiferous calyx ovate, reticulate, entire.

HAB. Waste places, &c. July—Aug. ☉. *Stem 3—4 ft. high, green; fl. green, in interrup. spikes.*

2. *A. arenaria*: stem herbaceous, spreading; leaves oblong-ovate, subsessile, silvery-mealy beneath, very entire; upper ones acute or acuminate; fructiferous calyx muricate, dentate, retuse.

HAB. Sea-coast. Aug.—Sept. ☉. *A foot high, much branch.; leav. 1 in. long; cal. 3-lobed, large.*

3. *A. laciniata* β. *americana*: stem herbaceous, diffuse; leaves triangular hastate, deeply toothed, glaucous, a little pulverulent; perfect flowers tetandrous; fructiferous calyx rhomboid, acute, entire.

HAB. Salt marshes. Aug. ☉. *Erect or procumb.; leav. petiol, gray; fl. in glom. racemes.*

4. *A. patula*: stem herbaceous, spreading; leaves triangular-hastate, smooth above, irregularly toothed; the upper ones entire; fructiferous calyx submuricate on the sides.

HAB. New-York. +

5. *A. Halimus*: stem frutescent; leaves alternate and opposite, subrhomboid, very entire.

HAB. New-Jersey. +

197. CHENOPODIUM. Goose-foot. *Chenopodeæ*.

1. *C. Bonus Henricus*: leaves triangular-hastate, very entire; spikes compound, terminal and axillary, erect, leafless.

HAB. New-York, &c. June. ♀. *Stem. 1 ft. high; leav. large, dark green; fl. green, polyg.*

2. *C. rhombifolium*: leaves triangular-rhombic, acute, repandly toothed; racemes axillary, erect, leafless; bracts minute, inflexed.

HAB. Pennsylvania. June. ☉. *Leav. acutely tooth.; racem. simp., short.*

3. *C. album*: leaves rhomboid-ovate, erose, entire at the base; upper ones oblong, very entire; racemes branched, somewhat leafy; seed smooth.

HAB. Cultivated grounds, &c. July—Sept. ☉. *Stem erect, 2—4 ft. high; leaves mealy.*

β *viride*: leaves greener and more entire; racemes more branched, a little leafy.

4. *C. hybridum*: leaves ovate-cordate, acuminate, angularly toothed; racemes axillary, paniculate, divaricate, leafless.

HAB. Waste places, &c. July—Aug. ☉. *Stem. 2—3 ft. high; leav. large, nearly smooth, bright green.*

5. *C. rubrum*: leaves rhomboid-triangular, deeply toothed and sinuate; racemes erect, compound, leafy.
HAB. Waste places. July. ☉. *Stem reddish; leav. dark green; glomerules minute.*
6. *C. ambrosoides*: leaves lanceolate, remotely toothed; racemes simple, axillary, leafy.
HAB. Waste places. Aug.—Oct. ☉. *Much bran., often diffuse, strong-scented; leav. small.*
7. *C. Botrys*: leaves oblong, sinuate; racemes naked, much divided.
HAB. Sandy waste places. Aug.—Sept. ☉. *One ft. high, sweet-scented, viscid-pubes; fl. distinct.*
8. *C. anthelminticum*: perennial; leaves oblong-lanceolate, toothed; spikes long, interrupted, leafless; style 3-cleft.
HAB. Sandy fields. Sept. ☉? *Strong-scented, 1½—2 ft. high, often reddish; racem. axill. and term.*
9. *C. glaucum*: leaves oblong, repand, glaucous beneath; spikes simple, naked, glomerate, axillary and terminal.
HAB. New-York. ☉. *Stem diffuse, thick; racemes short, lobed, leafless.*
10. *C. maritimum*: leaves linear, fleshy, semicylindrical; flowers axillary, glomerate.
HAB. Salt marshes. Aug.—Sept. ☉. *Stem 1½—2 ft. high; glomerules small; seed spiral.*

198. SALSOLA. Salt-wort. *Chenopodææ*.

1. *S. Kali*: herbaceous, decumbent; leaves subulate, canaliculate, spinose; flowers axillary, solitary; fructiferous calyx with a scarious margin.
HAB. Sea-coast. Aug. ☉. *Stem much bran., pubes.; cal. spreading; leav. subulate.*
2. *S. caroliniana*: leaves dilated; calyx with a broader margin.
HAB. Sandy fields and waste places, near salt water. *Cal. depress., reddish.*
3. *S. Tragus*: herbaceous, spreading, smooth; leaves subulate, fleshy, mucronate-spinous; flowers subsolitary; calyx subovate; margin flattened, discoloured.
HAB. New-Jersey, &c. July. +.

3. *S. Soda* : herbaceous, smooth ; branches ascending ; leaves semiterete, rather acute ; fructiferous calyx transversely carinate in the middle, somewhat membranaceous.

HAB. New-York. +

199. ULMUS. Elm. *Ulmaceæ*.

1. *U. americana* : branches smooth ; leaves somewhat doubly serrate, unequal at the base ; serratures uncinately acuminate ; flowers pedicellate ; fruit fimbriate.

HAB. Woods. April. *A large tree ; bran. long, recurv. ; leav. altern. ; fl. purplish, small appearing before the leav.*

2. *U. fulva* : leaves oval-oblong, much acuminate, pubescent on both sides ; buds tomentose ; flowers sessile.

HAB. Rocky hills. April. *Tree 20—25 ft. high ; fl. conglomer., ciliate ; stam. 7.*

3. *U. nemoralis* : leaves oblong, somewhat smooth, equally serrate, nearly equal at the base ; flowers sessile.

HAB. River banks. +.

200. CELTIS. Nettle-tree. *Ulmaceæ*.

1. *C. occidentalis* : leaves ovate, acuminate, equally serrate, unequal at the base, scabrous above, pubescent beneath ; flowers subsolitary.

HAB. Woods. May. *Tree middle-sized ; leav. altern. ; fl. small, greenish-white ; drupe purp.*

2. *C. crassifolia* : leaves ovate, acuminate, unequally serrate, subcoriaceous, scabrous on both sides, unequal at the base ; peduncles mostly 2-flowered.

HAB. River banks. *Tree smaller than No. 1.*

3. *C. pumila* : leaves ovate, acuminate, equally serrate, unequal at the base ; the younger ones only pubescent ; peduncles mostly 3-flowered ; fruit solitary.

HAB. Banks of rivers.

201. ERYNGIUM. *Eryngo*. *Umbelliferae*.

1. *E. aquaticum* : leaves linear-lanceolate, remotely ciliate-spinous ; inferior ones ensiform, those of the flowers lanceolate, dentate ; involucre shorter than the globose capitulum, entire, as are also the scales of the receptacle ; stem subdichotomous.

HAB. New-Jersey? 4. *Root tub.*; *stem 2—3 ft. high, trichot. above*; *leav. long*; *fl. wh. or pale blue.*

2. *E. virginianum*: leaves long-lanceolate, serrate; involucrum longer than the heads; chaff tricuspidate.

HAB. Shores of rivers. 4. *Root tub.*; *stem 3—4 ft. high*; *leav. 6 in. long*; *heads num.*; *fl. wh. or blue.*

3. *E. virgatum*: leaves spathulate-ovate, irregularly toothed; leaflets of the involucrum linear, longer than the globose heads; chaff tricuspidate.

HAB. Wet meadows. 4? *Stem 2—3 ft. high*; *leav. 2 in. long, acutely dent.*; *heads small*; *fl. blue.*

202. SANICULA. Sanicle. *Umbelliferae*.

S. marilandica: leaves all digitate; leaflets oblong, incisely serrate; stamiferous flowers numerous, pedicellate.

HAB. Woods and thickets. June—Aug. 4. *Stem 2 ft. high*; *fl. in small capit., umb. white.*

3. *canadensis*: leaves subternate; leaflets ovate, coarsely toothed.

203. HYDROCOTYLE. Marsh penny-wort.

Umbelliferae.

1. *H. vulgaris*: leaves peltate, orbicular, crenate; umbels capitate, about 5-flowered.

HAB. Wet places. 4. *Root creep.*; *fl. in interrup. spikes*; *fl. whitish.*

2. *H. umbellata*: leaves peltate, crenate, emarginate at the base; umbel of many pedunculate flowers.

HAB. Wet places. 4. *Root creep.*; *leav. subrenif.*; *umb. 20—30-fl., longer than the leav.*; *fl. renif.*

3. *H. americana*: smooth; root tuberous; leaves reniform, somewhat 7-lobed, crenate; umbels few-flowered, sessile.

HAB. Wet shady places. June—Aug. 4. *Creeping*; *stem filif.*; *umb. very small, glomerate.*

4. *H. ranunculoides*: leaves somewhat 5-lobed, cordate, crenate-dentate; umbels capitate, 8—10-flowered.

HAB. Pennsylvania. June. 4. *Leav. nearly circular*; *pedunc. 1 in. long*; *pedicels very short.*

5. *H. lineata*: very smooth, creeping; leaves sessile, cuneate-linear, with transverse nerves; umbels pedunculate.

HAB. Muddy banks. July—Aug. 4. *Leav.* $1\frac{1}{2}$ in. long, succul., with 5 transv. nerves; *umb.* 8—10-fl.

6. *H? composita*: root tuberous; stem simple, 2-leaved; leaves subternate; leaflets many-cleft; umbel 3—5-flowered.

HAB. Alluvial soils. April. 4. *Root* round; *stem* ascend., 1-leaved; *scapes* 4—5 in. high; *fl.* white.

204. SISON. Honey-wort. *Umbelliferae*.

1. *S. aureus*: stem nearly simple, sulcate; leaves bi-ternate, shining; leaflets oblong-lanceolate, attenuate at the base, incisely serrate; involucrum 0.

HAB. Rocky hills. June—July. 4. *Stem* $1\frac{1}{2}$ —2 ft. high; *umb. comp.*; *fl.* yell.; *fruit* dark-col.

2. *S. integerrimus*: stem nearly simple; leaves bi-ternate, glaucous, very entire; leaflets oval, entire; umbel with elongated rays; involucrum 0.

HAB. Meadows and mountains. June. 4. *Stem* 18 in. high; *rays of the umb. filif.*; *fl.* yell.; *fruit* black.

3. *S. capillaceus*: leaves decompose, filiform; stem dichotomous, angular; involucrum subpinnatifid.

HAB. Brackish meadows. July—Oct. ☉. *Much bran.*, 1 ft. long; *umb. axill.*, *pedunc.*; *fl.* white.

205. CNIDIUM. *Umbelliferae*.

1. *C. canadense*: stem angular, flexuous; leaves bipinnate, shining; leaflets many-parted; segments lanceolate.

HAB. Mouths of rivers. +

2. *C. atropurpureum*: radical leaves subcordate, simple, serrate; cauline ones ternate; leaflets ovate, acute, subcordate; middle one petiolate; partial involucre dimidiate, 3-leaved.

HAB. Rocky banks of rivers. June. 4. *Stem* 2—3 ft. high; *fl.* dark-purple.

206. SMYRNIUM. Alexanders. *Umbelliferae*.

S. cordatum: radical leaves simple, cordate, crenate; stem-leaves ternate, serrate; umbels terminal.

HAB. Rocky hills. May—June. 4. *Stem* 2—3 ft. high; *rad. leav. on long pet.*; *fl.* yell.; *fruit* black.

207. CICUTA. *Umbelliferæ*.

1. *C. maculata*: stem spotted; leaves triternate; leaflets subternate, lanceolate, acuminate, mucronately-serrate; umbels axillary and terminal; partial involucre setaceous.

HAB. Wet places. July—Aug. ♀. Stem 3—6 ft. high, glauc.; umb. large, slender.; fl. white. Poisonous!

2. *C. bulbifera*: leaves various, ternate and biternate, bulbiferous; leaflets linear and linear-lanceolate, remotely toothed; umbels terminal, solitary.

HAB. Swamps. Aug. ♀. Stem 2—3 ft. high, slender.; leav. bulbif. in the axils.; umb. small; fl. wh.

208. DAUCUS. Carrot. *Umbelliferæ*.

- D. Carota*: stem hispid; leaves tripinnate; leaflets incised, linear-lanceolate, acute; umbel at length concave; fruit bristly.

HAB. Old fields. June—Aug. ♂. Stem 2 ft. high; leav. pale green; fl. white.

209. MYRRHIS. *Umbelliferæ*.

1. *M. procumbens*: stem procumbent, somewhat hairy; leaves bipinnate; segments lanceolate, rather obtuse; umbels 3-rayed, few-flowered; fruit smooth.

HAB. Shady rocky places. May. ☉. Stem 6—8 in. long; fl. all fert., white; fruit linear.

2. *M. Claytoni*: stem hairy, (at first hoary-white); leaves biternate, pubescent; leaflets incisely lobed, dentate; umbel 3-rayed; central flowers abortive; universal and partial involucre 3—5-leaved, lanceolate, ciliate; fruit attenuate at the base, with hispid angles, not rostrate; style very short.

HAB. Shady rocky places. May—June. ♀. Root fusif.; stem 2 ft. high; fruit linear-lan., blackish.

3. *M. longistylis*: stem smooth; leaves biternate; the lower ones on short petioles; leaflets ovate, incisely lobed and dentate; umbel 3—4-rayed; central flowers abortive; universal and partial involucre 3—5-leaved, oblong, acuminate; fruit attenuate at the base, with hispid angles; styles long, subulate, straight.

HAB. Wet meadows. June. 4. Stem 2—3 ft. high; leav. slightly hairy; partial petiol. elong. 7 fl. wh.

4. *M. canadensis*: leaves ternate, smooth; leaflets rhomboid-ovate, acute, incisely toothed, acutely serrate; partial involucre minute, subulate; fruit oblong, very smooth.

HAB. Rocky woods. June. 11. Stem $1\frac{1}{2}$ —2 ft. high, erect, smooth; umb. num.; fr. 3 lin. long.

210. SIUM. Water-parsnip. *Umbelliferae*.

1. *S. latifolium*: stem angular; submerged leaves bipinnatifid; upper ones pinnate; leaflets oblong-lanceolate, unequal at the base, acutely serrate; umbels terminal.

HAB. Shady swamps. July. 4. Root creep.; stem 7-ang., 18 in. high; leaflet 4 pairs; fl. white.

2. *S. lineare*: stem angular and sulcate; leaves pinnate; leaflets 4—5 pairs, linear-lanceolate, acutely and finely serrate; involucre many-leaved, linear; umbels terminal.

HAB. Swamps. Aug. 24. Stem 7-ang., 2—3 ft. high; leaflet long and narrow; fl. white; cal. obsol.

211. CONIUM. Hemlock. *Umbelliferae*.

C. maculatum: stem very smooth, spotted; leaves tripinnate; leaflets lanceolate, pinnatifid; segments lanceolate, nearly entire.

HAB. Road sides, &c. July. 3. Stem 2—4 ft. high; leav. smooth and shin.; fl. white. Poisonous!

212. LIGUSTICUM. Lovage. *Umbelliferae*.

1. *L. scoticum*: leaves biternate; leaflets subrhombic-ovate, coarsely serrate; involucre linear-lanceolate.

HAB. Salt marshes. July. 4. Stem 18 in. high, smooth; leav. retic.; umb. pedunc.; fl. wh.

2. *L. actaeifolium*: leaves biternate; leaflets oval, equally toothed; partial involucre setaceous; fruit oblong-oval, leaves somewhat wings.

HAB. New-York. 24. Stem very tall, smooth; petioles long; umb. num., subvert.; fl. wh.

213. HERACLEUM. Cow-parsnip. *Umbelliferae*.

H. lanatum: leaves ternate, petiolate, tomentose beneath; leaflets petioled, round-cordate, lobed; fruit orbicular.

HAB. Wet meadows. June. 4. Stem 3—5 ft. high, thick, pubes.; umb. large; fl. wh.

214. PASTINACA. Parsnip. *Umbelliferae*.

1. *P. sativa*: stem sulcate; leaves pinnate; leaflets subpubescent beneath, oblong, incised; terminal one 3-lobed.

HAB. Fields, &c. July—Sept. ♂. Stem 2 ft. high, smooth; leaf sess.; fl. yell.

2. *P. rigida*: stem terete striate; leaves pinnate, smooth; leaflets oblong-lanceolate, entire, or with several remote teeth.

HAB. Swamps. Sept. 4. Stem 2—4 ft. high, rigid; leaf 4—5 pairs; fl. white.

3. *P. ambigua*: stem slightly angular; leaves pinnate, smooth; leaflets linear, entire, subglaucous beneath; umbels terminal, subsolitary; partial involucre subulate.

HAB. Swamps. Sept. 4. 3—5 ft. high, slend.; fl. wh.

215. ANGELICA. *Umbelliferae*.

1. *A. triquinata*: stem terete, pubescent above; leaves ternate, very smooth; the partitions quinate; leaflets oblong-ovate, equally serrate; the inferior ones 2-lobed at the base.

HAB. Dry woods. Aug. 4. Stem 3—5 high, straight, white above, leav. thick; fl. white.

2. *A. atropurpurea*: stem smooth, coloured; leaves ternate; the partitions subquinate; leaflets ovate, acute, incisely serrate, sublobed; the 3 terminal ones confluent; petioles very large, inflated.

HAB. Wet meadows. June. 4. Root aromat.; stem 3—5 ft. high, thick, purplish; fl. greenish.

3. *A. lucida*: leaflets equal, ovate, incisely serrate.

HAB. Shady woods. 4. Stem 1—2 high; rad. leav. tripin.; leaf dark green, lucid above.

216. THAPSIA. *Umbelliferae*.

T. trifoliata: petioles and nodes of the stem pubescent; leaves biternate and ternate; leaflets cuneate and ovate, unequally and incisely serrate, entire at the base; umbels terminal; partial involucre 3-leaved, subulate.

HAB. Sandy banks of rivers. June. 4. Stem 3 ft. high, ang. and sulc.; umb. 3—4; fl. yell.

TRIGYNIA.

217. VIBURNUM. *Caprifolia*.

1. *V. prunifolium*: smooth; leaves round-obovate, acutely serrate; petioles margined.

HAB. Woods and hedges. June. A small tree, leav. oppos., $1\frac{1}{2}$ in. long; fl. white; ber. oval, dark blue.

2. *V. pyrifolium*: smooth; leaves ovate-oblong, acute, crenate-serrate; petiole naked; cymes subpedunculate; fruit ovate-oblong.

HAB. Rocky woods. June. Shrub 5—10 ft. high; leav. 2 in. long; ber. red.

3. *V. Lentago*: smooth; leaves broad-ovate, acuminate, acutely serrate; petioles margined, undulate; cymes sessile.

HAB. Rocky woods. May. Shrub 8—12 ft. high; leav. 3 in. long, often subcord.; ber. black.

4. *V. nudum*: leaves oval-oblong; margin revolute and obscurely crenulate; petioles naked; cymes pedunculate.

HAB. Swamps. June. Shrub 8—10 ft. high; leav. 4 in. long, punct. and retic. beneath; ber. blue.

5. *V. Lantanoides*: leaves orbicular-cordate, abruptly acuminate; nerves and petioles pulverulent-tomentose, unequally serrate; cymes closely sessile.

HAB. Rocky woods. May—June. Shrub 4—8 ft. high; leav. large, with the nerv. rusty; cym. often radiate.

6. *V. dentatum*: nearly smooth; leaves on long petioles, orbicular-ovate, dentate-serrate, plicate; axils of the veins pubescent beneath; cymes pedunculate; fruit subglobose.

HAB. Woods and hedges. June. *Shrub 8 ft. high, with straight bran. ; ber. small, blue.*

7. *V. pubescens*: leaves on very short petioles, ovate, acuminate, dentate-serrate, villous beneath; cymes pedunculate; fruit oblong.

HAB. Mountains. June. *Shrub 6 ft. high; leav. and cymes smaller than No. 6.*

8. *V. acerifolium*: leaves subcordate, 3-lobed, acutely serrate, pubescent beneath; lobes acuminate, petioles without glands, hairy; cymes on long peduncles,

HAB. Rocky woods. May—June. *Shrub 4—6 ft. high; leav. broad; ber. oval, compress., blackish.*

9. *V. Oxycoccus*: leaves 3-lobed, acute at the base, 3-nerved; lobes divaricate, acuminate, remotely and obtusely dentate; petioles glandular; cymes radiate.

HAB. Mountain woods. May—June. *A small shrub; branch. spread.; ber. large, red, acid.*

10. *V. edule*: leaves 3-lobed, rather obtuse at the base, 3-nerved; lobes very short, with acuminate-dentate serratures; petioles glandular; cymes radiate.

HAB. Banks of rivers. *Shrub smaller and more upright than the last; ber. large, red, acid.*

218. SAMBUCUS. Elder. *Caprifolia*.

1. *S. canadensis*: nerves and petioles very smooth; leaflets oblong-oval, about 3 pairs, acuminate, smooth; midrib subpubescent; cymes lax; stem frutescent.

HAB. Low grounds. May—July. *Shrub 6—10 ft. high; leav. often bipin.; fl. white, ber. deep purp.*

2. *S. pubens*: petioles and leaves beneath pubescent; leaflets oval-lanceolate; cymes paniculate; stem fruticose.

HAB. Mountains. June. *Shrub 6—3 ft. high; leav. simply pinnate, 3 pairs; ber. small, red.*

219. RHUS. Sumach. *Terebintaceæ*.* *Leaves pinnate*.

1. *R. glabrum*: leaflets lanceolate, smooth, acuminate, acutely serrate, whitish beneath; flowers perfect; fruit downy.
HAB. Hedges and thickets, July. Shrub 6—12 ft. high, with strag. branch.; leaflet. 12—15 pairs; ber. crim.
2. *R. typhinum*: branches and petioles very villous; leaflets in many pairs, lanceolate-oblong, acuminate, acutely serrate, pubescent beneath.
HAB. Rocky hills. June. Shrub 8—15 high; leaflet. 10—15 pairs; pan. dense, oblong; ber. purp. vill.
3. *R. copallinum*: petiole winged; leaflets in many pairs, oval-lanceolate, very entire, shining on the upper surface; panicle sessile; flowers dioecious.
HAB. Dry woods and hill sides. July. Shrub 4—6 ft. high; leaflet. dark-green, 4—6 pairs; ber. red, hairy.
4. *R. Vernix*: very smooth; leaflets in many pairs, oval, abruptly acuminate, entire; panicle loose, flowers dioecious.
HAB. Swamps. June—July. A small tree; leaflet. 5 pairs, subsess.; pan. clust.; ber. smooth, whitish.

* * *Leaves ternate*.

5. *R. Toxicodendron*: stem erect; leaflets broad-oval, entire or sinuate-dentate, subpubescent beneath; flowers dioecious, in sessile axillary racemes.
HAB. Dry woods. June—July. Shrub 1—3 ft. high, smooth; leav. shin. above; ber. smooth.
β. radicans: stem climbing.
HAB. Woods and hedges. Stem climbing very high.
6. *R. aromaticum*: leaflets sessile, ovate-rhomboid, dentate, pubescent beneath; flowers amentaceous, dioecious; berries hairy.
HAB. Mountains. April. Shrub small; fl. in axill. racem. or aments.; ber. clust., red.

220. STAPHYLEA. Bladder-nut. *Celastrinæ*.

S. trifolia: leaves ternate.

HAB. Rocky hills. May. *Shrub* 6—10 ft. high; *fl.* in pend. racem., greenish-wh.; caps. large.

TETRAGYNIA.

221. PARNASSIA. Grass of Parnassus.
Uncertain.

1. *P. caroliniana*: radical leaves orbicular-ovate, cordate; nectaries 3-bristled.

HAB. Boggy woods. Aug.—Sept. 4. *Leav.* mostly rad., on long pet.; *fl. sol.*, term., yellowish-wh.

2. *P. palustris*: radical leaves cordate; nectaries many-bristled.

HAB. Bog-meadows. +.

PENTAGYNIA.

222. ARALIA. *Aralice*.

1. *A. nudicaulis*: nearly stemless; leaf solitary, triquinate; scape naked, shorter than the leaf; umbels few.

HAB. Among rocks. June—July. *Root thick, creep.*; petiole long; leaf. oval, serrate; scape 1-fl., long, 3-umbelled; *fl. greenish.*

2. *A. racemosa*: stem herbaceous, branched; petioles 3-parted; partitions ternate and quinate; umbels compound, in axillary panicles.

HAB. Rocky woods. July—Aug. 4. *Root thick, aromat.*; stem 3—4 ft. high; umb. num.

3. *A. hispida*: suffruticose; stem and petioles hispid; leaves doubly pinnate; leaflets ovate, incisely serrate; umbels on long peduncles.

HAB. Mountains. July—Aug. Stem $1\frac{1}{2}$ ft. high, very hispid below; pedunc. axill. and term.

4. *A. spinosa*: arborescent; stem and leaves spinous; leaves doubly pinnate; umbels numerous, in compound panicles.

HAB. Low fertile woods. *Shrub* 8—12 ft. high, very prickly; *pan. very large, term.*

223. STATICE. Thrift. *Plumbagineæ.*

1. *S. Armeria*: scape simple, terete, capitate; leaves linear, flat.

HAB. Sea-shore. $\frac{1}{4}$. *Leav. all rad., cespit.*; scape 1 ft. high; *fl. rose-col., in a term. head. +.*

2. *S. Limonium*: scape paniculate, terete; leaves oblong, undulate, smooth and nerveless, mucronate below the tip.

HAB. Salt marshes. Aug.—Oct. $\frac{1}{4}$. *Root large*; scape 1 ft. high; *pan. large*; *fl. secund, blue.*

224. LINUM. Flax. *Lineæ.*

1. *L. virginianum*: stem paniculate at the summit; radical leaves obovate or spatulate; cauline ones lanceolate; flowers remote, alternate; segments of the calyx acute.

HAB. Rocky hills. July—Aug. ☉. *Stem* $1\frac{1}{2}$ —3 ft. high, *slend.*; *leaves scat.*; *fl. very small, pale yell.*

L. usitatissimum: segments of the calyx ovate, acute, 3-nerved; petals crenate; leaves lanceolate, alternate; stem subsolitary

HAB. Fields. June—July. ☉. *Stem* 1—2 ft. high, *bran. above*; *fl. large, blue.*

225. SIBBALDIA. *Rosaceæ.*

S. procumbens: leaves ternate; leaflets cuneate, tridentate, smooth above, hairy beneath; flowers corymbed; petals lanceolate, acute, about as long as the calyx.

HAB. High mountains. $\frac{1}{2}$ *Plant small, procumb.*; *fl. yellow.*

HEXAGYNIA.

226. DROSERA. Sun-dew. *Droseraceæ.*

1. *D. rotundifolia*: leaves suborbicular, dilated; petiole elongated, hairy above; racemes mostly simple, erect.

HAB. Bogs. July—Aug. 4. *Leav. all rad., spreading, covered with brown viscid filam.; scape 4—8 in. long; fl. secund, small, white; seeds lin.*

2. *D. longifolia*: leaves crenate, obovate, tapering below into a long footstalk, erect-spreading, scape declined at the base; stipules many-cleft, capillaceous; segments of the calyx ovate-oblong, obtuse.

HAB. Bogs and sandy swamps. July—Aug. 4. *Caudex sometimes elong.; scape bent and ascend.; seeds ovate.*

3. *D. filiformis*: leaves filiform, very long, glandulous the whole length; scape simple or bifid.

HAB. Sandy swamps. Aug.—Sept. 4. *Leav. 6—10 in. long; scape 1 ft. long; fl. large, purp.*

POLYANDRIA.

227. XANTHORHIZA. Yellow-root. *Ranunculacea.*

X. apiifolia.

HAB. Banks of rivers. April. *Suffruticose; root large, yell.; stem 2—3 ft. high; leav. bipinn.; fl. in. comp. racem., dark-purp.*

HEXANDRIA.

MONOGYNIA.

A. *Flowers complete, having a calyx and corolla.*

228. TRADESCANTIA. *Cal. 3-leaved. Pet. 3. Fil. villous. Caps. superior, 3-celled, many-seeded.*

229. LEONTICE. *Cal. 6-leaved, caducous. Pet. 6, unguiculate, opposite the calyx. Nect. 5, inserted upon the claws of the petals. Anth. adnate to the filam.; 2-celled; cells opening longitudinally.*

Per. rupturing at an early period, leaving the large naked, drupe-form seed elevated on its *funic.*

230. BERBERIS. *Cal.* 6-leaved. *Pet.* 6, with 2 glands on each claw. *Style* 0 ; *stig.* umbilicate. *Berry* 1-celled, 2—4-seeded.
231. PRINOS. *Cal.* minute, 6-cleft. *Cor.* monopetalous, subrotate, 6-parted. *Berry* 6-seeded.
232. FLÆRKEA. *Cal.* 3-leaved. *Cor.* 3-petalled, shorter than the calyx. *Style* bifid. *Utric.* 2—3, united, 1-seeded, superior.

B. Flowers spathaceous.

233. AMARYLLIS. *Cor.* superior, 6-petalled, irregular. *Fil.* arising from the orifice of the tube, declined, or straight, unequal.
234. ALLIUM. *Cor.* 6-petalled, spreading. *Spath* many-flowered. *Umb.* crowded. *Caps.* superior, 3-celled, 3-valved, many-seeded.
235. HYPOXIS. *Spath.* 2-valved. *Cor.* superior, 6-parted, persistent. *Caps.* elongated, narrowed at the base, 3-celled, many-seeded. *Seeds* roundish, naked.
236. PONTEDERIA. *Cor.* inferior, 6-cleft, bilabiate ; under side of the tube perforated with 3 longitudinal foramina ; lower part persistent, calycine. *Stam.* unequally inserted ; 3 of them upon the summit of the tube. *Utric.* muricate, 1-seeded.

C. Flowers naked. (Without a spath ; perianth single, petaloid.)

237. CONOSTYLIS. *Cor.* semi-superior, 6-cleft, persistent, woody. *Anth.* erect. *Style* conic, tripartite ; *stig.* simple. *Caps.* opening at the summit, 3-celled, 3-valved, many-seeded.
238. ALETRIS. *Cor.* tubulous-ovate, 6-cleft at the summit, rugose, persistent. *Stam.* inserted upon the orifice. *Style* triquetrous, tripartite. *Caps.* semisuperior, many-seeded, opening at the summit.
239. HEMEROCALLIS. *Cor.* campanulate ; tube cylindric. *Stam.* declined. *Stigmas* rather small, simple, somewhat villous.

240. AGAVE. *Cor.* superior, erect, tubular or infundibuliform. *Staminif. fil.* longer than the corolla, erect. *Caps.* triangular, many-seeded.
241. PHALANGIUM. *Cor.* 6-petalled, spreading. *Fil.* smooth. *Caps.* superior, ovate. *Seeds* angular.
242. NARTHECIUM. *Cor.* inferior, 6-petalled, spreading, persistent. *Fil.* filiform, hairy. *Caps.* prismatic, 3-celled, many-seeded. *Seeds* finely attenuate at each extremity. *Cal.* 0.
243. ORNITHOGALUM. *Cor.* 6-petalled, persistent, spreading above the middle. *Cal.* 0. *Fil.* dilated at the base. *Caps.* superior, roundish, 3-celled. *Seeds* roundish.
244. LILIUM. *Cor.* 6-petalled, campanulate. *Pet.* mostly reflexed, marked with a longitudinal nectariferous line. *Stam.* shorter than the style. *Stig.* entire. *Caps.* superior, subtriangular; valves connected by cancellate hairs.
245. ERYTHRONIUM. *Cor.* 6-petalled, subcampanulate; petals reflexed; the interior ones with a callous tooth on each side near the base, and a nectariferous pore. *Caps.* superior, substipitate. *Seeds* ovate.
246. UVULARIA. *Cor.* inferior, 6-petalled, erect; petals with a nectariferous cavity at the base of each. *Fil.* very short; *anth.* adnate. *Stig.* reflexed. *Caps.* triangular, 3-celled, 3-valved; valves septiferous in the middle. *Seeds* numerous, subglobose, axillate at the hilum.
247. STREPTOPUS. *Cor.* inferior, 6-petalled, subcampanulate. *Stigmas* very short. *Berry* subglobose, smooth, 3-celled. *Seeds* few, hilum naked.
248. CONVALLARIA. *Cor.* inferior, 6-cleft. *Berry* globose, spotted, 3-celled.
249. ASPARAGUS. *Cor.* inferior, 6-parted. *Style* very short; *stigmas* 3. *Berry* 3-celled, cells 2-seeded.

D. *Flowers incomplete. (Perianth single, resembling a calyx.)*

250. **ORONTIUM.** *Spad.* cylindric, crowded with flowers. *Cor.* 6-petalled, naked. *Style* and *stig.* scarcely any. *Utric.* 1-seeded.
251. **ACORUS.** *Spad.* cylindric, covered with flowers. *Cor.* 6-petalled, naked. *Stig.* sessile, very minute. *Caps.* 3-celled.
252. **JUNCUS.** *Perian.* 6-leaved, glumaceous. *Caps.* superior, 3-celled, 3-valved; cells many-seeded. *Seeds* attached to a partition in the middle of each valve.
253. **LUZULA.** *Perian.* 6-leaved, glumaceous. *Caps.* superior, 3-celled, 3-valved; cells 1-seeded, valves without partitions.

TRIGYNIA.

254. **MELANTHIUM.** Polygamous.—*Cal.* 0. *Cor.* 6-parted, rotate; segments unguiculate, with 2 glands at the base of each; claws staminiferous. *Caps.* subovate, 3-celled; apex partly trifold. *Seeds* numerous, membranaceously winged.
255. **VERATRUM.** Polygamous.—*Cal.* 0. *Cor.* 6-parted, expanding; segments sessile, without glands. *Stam.* inserted upon the receptacle. *Cap.* 3, united, many-seeded.
256. **HELONIAS.** *Cor.* 6-parted, spreading, without glands. *Styles* 3, distinct. *Caps.* 3-celled, 3-horned, cells few-seeded.
257. **XEROPHYLLUM.** *Cor.* subrotate, deeply 6-parted. *Fil.* contiguous at the base. *Stig.* 3, revolute, partly united below. *Caps.* subglobose, 3-celled; cells 2-seeded, opening at the summit.
258. **TOFIELDIA.** *Cal.* 3-leaved. *Pet.* 6. *Anth.* roundish. *Styles* vertical, short. *Caps.* 3, superior, united at the base, many-seeded.

259. SCHEUCHZERIA, *Cal.* 6-parted. *Cor.* 0. *Anth.* linear. *Stig.* sessile, lateral. *Caps.* inflated, distinct, mostly 2-seeded.
260. TRIGLOCHIN. *Perian.* 6-leaved, deciduous; leaflets concave; 3 of the leaflets inferior and more calycine. *Stam.* 3—6, very short; *anth.* turned outward. *Stig.* nearly sessile, adnate. *Caps.* 3—6, united above by a com. receptacle and axis, generally separating at the base, 1-seeded, not opening.
261. GYROMIA. *Cal.* 0. *Cor.* 5-parted, revolute. *Fil.* and *anth.* distinct. *Styles* 0; *stig.* 3, filiform and divaricate, united at the base. *Berry* 3-celled; cells 5—6-seeded. *Seeds* compressed, 3-sided.
262. TRILLIUM. *Cal.* 3-leaved. *Cor.* 3-petalled. *Stig.* sessile. *Berry* superior, 3-celled; cells many-seeded.
263. RUMEX. *Perian.* 6-leaved. *Nut* triquetrous, covered by the 3 interior valviform leaves of the perianth. *Stig* many-cleft.

TETRAGYNIA.

264. SAURURUS. Flowers in an ament or crowded spike; scales 1 flowered. *Cor.* 0. *Anth.* adnate to the filaments. *Caps.* each 1, or rarely 2-seeded.

POLYGYNIA.

265. ALISMA. *Cal.* 3-leaved. *Pet.* 3. *Caps.* numerous, 1-seeded, not opening.

228. TRADESCANTIA. Spider-wort. *Commelineæ.*

1. *T. virginica*: erect; leaves lanceolate, elongated, smooth, flowers in a crowded umbel, sessile, pubescent.

HAB. Shady woods. May. 24. *Stem* 1 ft. high; *leav.* canalic.; *umb.* crowd.; *fl.* blue.

2. *T. rosea*: erect, simple; leaves linear; peduncles elongated; calyx smooth.

HAB. Wet sandy fields. May. 24. Stem 1 ft. high; leav. narrow; fl. small, rose-col.

229. LEONTICE. *Berberidæ*.

- L. thalictroides*: leaves bi-triternate; leaflets 2—3-lobed; flowers paniculate, from the centre of the leaves.

HAB. Rocky woods and mountains. Apr.—May. 24. A ft. high, smooth, mostly 2-leav.; fl. sm., greenish-yell.; seed large, dark blue.

230. BERBERIS. Barberry. *Berberidæ*.

- B. vulgaris* & *canadensis*: branches punctate, armed with trifid spines; leaves oblong-obovate, distinctly ciliate-serrate; racemes simple, subcorymbose, recurved.

HAB. Rocky hills. May—June. Shrub 3—4 ft. high; leav. altern.; filam. irritable; fl. yell.; ber. red, acid.

231. PRINOS. Winterberry. *Rhamni*.

1. *P. verticillatus*: leaves deciduous, oval, serrate, acuminate, pubescent beneath; flowers 6-parted, dioecious; staminiferous axillary, subumbellate; pistilliferous aggregated.

HAB. Moist woods and swamps. June. Shrub 6—3 ft. high; leav. alt.; fl. white; ber. scarlet.

- β. *tenuifolius*: leaves obovate, membranaceous, smooth beneath; pistilliferous 4—5 cleft, subsolitary.

HAB. Swamps. Leav. obuse, or slightly acum., midrib pubes.

2. *P. ambiguus*: leaves deciduous, oval, acuminate at each end; flowers 4-cleft; staminiferous ones crowded on the lower branchlets; pistilliferous solitary, on long peduncles.

HAB. Near Philadelphia. A small tree, bark whitish; leav. smooth, petiolate.

3. *P. lævigatus*: leaves deciduous, lanceolate, with adpressed serratures, smooth on both sides, shining above; nerves beneath scarcely pubescent; flowers 6-cleft; pistilliferous axillary, solitary, subsessile; staminiferous scattered.

HAB. Swamps. June. *Shrub* 6—8 ft. high; *leav.* $2\frac{1}{2}$ in. long; *stam. fl. pedunc., ber. red.*

4. *P. glaber*: leaves sempervirent, cuneate-lanceolate, coriaceous, smooth and shining, subdentate at the extremity; pedicels axillary, subsolitary, mostly 3-flowered.

HAB. Swamps and pine-barrens. July. *Shrub* 3—4 ft. high; *fl. perfect? pedunc.; ber. black.*

232. FLÆRKEA. *Juncææ*?

F. uliginosa.

HAB. River marshes. Apr.—May. ☉ *Decumb., splend., smooth, leav. alt.; trif. and pinnatif.; pedunc. axill.; fl. small, white.*

233. AMARYLLIS. *Amaryllideæ.*

- A. *Atamasco*: spath. bifid, acute; flowers pedicellate; corolla subcampanulate, subequal, erect, short and tubular at the base; stamens declined, equal.

HAB. Swamps. June. 4. *Root bulb.; leav. lin. concave; scape 6 in. high; fl. large, wh. and pink.*

234. ALLIUM. *Onion, &c. Asphodeleæ.*

1. *A. canadense*: scape naked, terete; leaves linear; head bulbiferous.

HAB. Meadows. May. 4. *Root bulb.; leav. long, flat above; fl. numerous, pale rose-col.*

2. *A. vineale*: cauline leaves rounded, fistulous; umbel bulbiferous; stamens alternately tricuspidate.

HAB. Meadows and pastures. May. 4. *Bulb. ovate, stem 2 ft. high; leav. long; fl. deep rose-col. &.*

3. *A. triflorum*: scape naked, terete, shorter than the leaves; leaves lanceolate, nerved, umbel few-flowered.

HAB. Mountains. May—June.

4. *A. cernuum*: scape naked, quadrangular, umbelliferous; leaves linear, nearly flat; umbel cernuous; stamens simple; germen 6-toothed.

HAB. Pennsylvania. July 4. *Leav.* 8—12 in. long, 3-lin. broad; *scape* 1—2 ft. high; *fl.* rose-col.

5. *A. tricoccum*: scape naked, nearly terete; leaves lanceolate-oblong, flat, smooth; umbel globose, seeds solitary.

HAB. Woods and mountains. June—July. 4. *Bulb.* large; *leav.* 1 in. broad; *fl.* white.

235. HYPOXIS. Star-grass. *Asphodelææ*.

- H. erecta*: hairy; scape 2—4-flowered; leaves linear; segments of the corolla lanceolate-oblong.

HAB. Woods and meadows. May—June. 4. *Root bulb.* solid; *leav.* gramin.; *fl.* yell.

236. PONTEDERIA. *Narcissi*?

- P. cordata*: leaves oblong-cordate; flowers in crowded spikes.

HAB. In fresh water. Aug. 4. *Leav.* subrad., 3—4 in. long, thick; *spath.* oblong; *fl.* aggreg. blue.

3. *angustifolia*: leaves elongated-triangular, truncate and subcordate at the base.

HAB. Mountain-lakes.

237. CONOSTYLIS. *Hæmodoracææ*.

- C. americana*: corolla woolly within; scape corymbose-panicled; leaves gramineous-ensiform, glaucous; filaments equal.

HAB. Sandy swamps. July—Aug. 4. *Root* creep.; *scape* 1 ft. long; *fl.* small, yellow within.

238. ALETRIS. Star-wort. *Asphodeleææ*.

1. *A. farinosa*: flowers pedicellate, oblong-tubular; corolla, when decaying, nearly smooth; leaves broad-lanceolate.

HAB. Sandy woods. July. 4. *Root præmorse; leav. rad., spreading; scape 2 ft. high; fl. white.*

2. *A. aurea*: flowers subsessile, short, subcampanulate; corolla, when decaying, rugose and very scabrous; leaves lanceolate.

HAB. In pine-barrens. July—Aug. 4. *scape 2—3 ft. high; pedicels bracteate; fl. yellow.*

239. HEMEROCALLIS. Day Lily. *Hemerocallideæ.*

H. fulva: leaves broad-linear, carinate; interior petals obtuse, undulate; exterior nerves of the petals ramose.

HAB. Wet meadows. June—Aug. 4. *Leav. very long; scape 3 ft. high; fl. large, fulvous. ♂.*

240. AGAVE. Bastard aloe. *Bromeliæ.*

A. virginica: stemless, herbaceous; leaves with cartilaginous serratures; scape simple.

HAB. Banks of rivers. Sept. 4. *Root præmorse; leav. succul.; scape 4—6 ft. high; fl. yellowish.*

241. PHALANGIUM. *Asphodeleæ.*

P. esculentum: root bulbous; leaves all radical, linear, carinate; stigma minutely 3-cleft.

HAB. Banks of rivers and lakes. Sept. 4. *Root tunic.; scape simp.; fl. pale blue.*

242. NARTHECIUM. *Juncetæ.*

N. americanum: raceme sometimes interruptedly spiked, lax; pedicels with a setaceous bract below the flower, and another embracing its base; filaments with very short hair.

HAB. Sandy swamps. Aug. 4. *Root creep.; leav. rad., narrow ensif.; fl. yellow intern.*

243. ORNITHOGALUM. Star of Bethlehem. *Asphodelæ.*

O. umbellatum: corymb. few-flowered; peduncles longer than the bracts; filaments subulate.

HAB. Moist meadows. May—June. 4. *Root bulb.; leav. rad., lin.; fl. white. §.*

244. LILIUM. Lily. *Liliaceæ.*

1. *L. philadelphicum*: leaves verticillate, linear-lanceolate; stem 1—2-flowered: corolla erect, campanulate, spreading; petals unguiculate.

HAB. Copses. June—July. 4. *Stem 2 ft. high; leav. 3-nerv.; fl. dark orange.*

2. *L. canadense*: leaves remotely verticillate, lanceolate; nerves hairy beneath; peduncles terminal, elongated, generally by threes; flowers nodding; corolla turbinate, campanulate, slightly revolute; petals lanceolate.

HAB. Moist meadows. June—July. 4. *Stem 2—4 ft. high; fl. about 3, spotted.*

3. *L. superbum*: leaves verticillate, linear-lanceolate, 3-nerved, smooth; the upper ones scattered; flowers in a pyramidal raceme, reflexed; petals revolute.

HAB. Wet meadows. July. 4. *Stem 4—6 ft. high; fl. 3—20, bright orange, spotted.*

4. *L. Catesbæi*: leaves scattered, linear-lanceolate; stem 1-flowered; corolla erect; petals with long claws, undulate on the margin, reflexed at the tip.

HAB. Pennsylvania. July. 4. *Stem 1½ ft. high; fl. large, scarlet, spotted.*

245. ERYTHRONIUM. Dog's-tooth Violet. *Liliaceæ.*

1. *E. americanum*: leaves lanceolate, punctate; petals oblong-lanceolate, obtuse at the point; interior ones bidentate near the base; style clavate; stigma entire.

HAB. Shady moist places. April—May. 4. *Leav. 2, rad; fl. solit. nod., yellow.*

2. *E. albidum*: leaves elliptical-lanceolate, not punctate; petals linear-lanceolate, obtuse; inner ones without dentures, subunguiculate; style 3-cleft; lobes reflexed.

HAB. River banks. April. 4. *Leav. 6 in. long; fl. large, bluish white.*

246. UVULARIA. Bell-wort. *Liliaceæ*.

1. *U. perfoliata*: leaves perfoliate, elliptic-obtuse; corolla campanulate, granular, scabrous within; anthers cuspidate.

HAB. Moist shady places. May—June. 4. 8—10 in. high; fl. pend. pale yell.

2. *U. flava*: leaves perfoliate, elliptical-oblong, undulate at the base; corolla tapering at the base, scabrous within; anthers awned.

HAB. Shady woods. May—June. 4. Fl. larger and brighter yellow than *U. perf.*

3. *U. grandiflora*: leaves perfoliate, oblong, acute; petals smooth within; anthers without awns; nectaries subrotund.

HAB. Rocky hills. 4. Fl. large, bright yellow.

4. *U. sessilifolia*: stem smooth; leaves sessile, oval-lanceolate, glaucous beneath; petals flat, smooth within; capsule stipitate.

HAB. Shady thickets. May—June. 4. Stem 6—12 in. high, forked above; fl. pale yellow.

247. STREPTOPUS. *Liliaceæ*.

1. *S. roseus*: smooth and shining; leaves amplexicaul, serrulate ciliate, anthers short, 2-horned.

HAB. Mountains. May—June. 4. Stem 18 in. high, dichot.; fl. rose-col.

2. *S. distortus*: smooth; leaves amplexicaul, smooth on the margin; pedicels distorted and geniculate in the middle; anthers sagittate, acuminate, much longer than the filaments.

HAB. Mountain woods. May. 4. Stem 2 ft. high; fl. solit., greenish yellow.

3. *S. lanuginosus*: hoary-pubescent; leaves sessile, subcordate at the base, acuminate; pedicels by pairs, on a very short foot-stalk.

HAB. High mountains. May. 4. Leav. abrupt, acum.; fl. large, greenish.

248. CONVALLARIA. Solomon's seal, &c. *Liliaceæ*.

* *Corolla deeply 4-parted, spreading; stamens 4; berry 2-celled.* (*Flowers in a terminal raceme.*) MAJANTHEMUM.

1. *C. bifolia*: Stem 2-leaved; leaves on short petioles, cordate oblong, very smooth on both sides; raceme simple, terminal; flowers tetrandrous.

HAB. Shady woods. May—June. 4. Stem 4—6 in. high; fl. small, white; ber. spotted with red.

** *Cor. 6-parted, spreading; filaments divergent, attached to the base of the segments.* (*Flowers in a terminal raceme.*) SMILACINA.

2. *C. stellata*: leaves numerous, alternate, oval-lanceolate, amplexicaul; raceme simple, terminal.

HAB. Wet meadows. May—June. 4. A foot high, terete; fl. small, white.

3. *C. trifolia*: stem about 3-leaved; leaves alternate, ovate-lanceolate, contracted at the base; raceme simple, terminal, few-flowered.

HAB. Mountain swamps. May. 4. A span high: fl. sm. white, on short pedicels.

4. *C. racemosa*: leaves numerous, alternate, sessile, oblong-oval, acuminate, nerved, pubescent; flowers in a terminal, racemose panicle.

HAB. Low grounds. June. 4. Stem 18 in.—2 ft. high, subflex.; fl. small, white; ber. red.

*** *Corolla subcampanulate, deeply 6-parted; style elongated; berry 2-celled, many-seeded.*

5. *C. umbellulata*: subcaulescent: leaves oblong-oval, ciliate on the margin, scape pubescent; umbel. terminal; pedicels nodding, with minute bracts at the base.

HAB. Mountain bogs. May—June. 4. Leav. very large, about 3, subrad.; scape 6—8 in. long; umb. 3—4 fl.; fl. greenish yellow; ber. blue.

**** *Corolla 6-cleft, cylindric; filaments inserted on the upper part of the tube; berry 3-celled; cells 2-*

seeded. (*Flowers axillary.*) POLY-
GONATUM.

6. *C. multiflora*: stem terete; leaves alternate, amplexicaul, oblong-oval; peduncles axillary, many-flowered.

HAB. Rocky hills. June—July. 4. Stem 2—3 ft. high, smooth; fl. gr. white.

7. *C. biflora*: stem terete, smooth; leaves alternate elliptical-lanceolate, 3-nerved; peduncles axillary, solitary, 2-flowered.

HAB. Rocky places. 4. Fl. yellow white, with green lips. +.

8. *C. pubescens*: stem nearly terete, furrowed; leaves alternate, amplexicaul, ovate, pubescent beneath; peduncles axillary generally 2-flowered.

HAB. Rock. June. 4. Stem 18 in. high, smooth; fl. yel. wh. and green.

9. *C. canaliculata*: stem canaliculate; leaves alternate, amplexicaul, oblong, pubescent on the margin; peduncles axillary, 2-flowered.

HAB. Shady woods. 4. +.

10. *C. latifolia*: stem angular; leaves sessile, ovate, acuminate; peduncles one or many-flowered.

HAB. Rocky banks. June—July. Stem 3—5 ft. high; ped. 3—6 fl.; fl. gr. wh.

249. ASPARAGUS. *Asparagææ*.

- A. officinalis*: unarmed; stem herbaceous, erect terete, very much branched; leaves setaceous, fasciculate, flexible; peduncles jointed in the middle.

HAB. Rocky and gravelly shores. June. 4. Fl. gr. white. ♂.

250. ORONTIUM. Golden club. *Aroidææ*.

- O. aquaticum*: leaves lanceolate-ovate; scape cylindrical, spiked.

HAB. In water. May. 4. Leav. rad. large; spadix yellow.

251. ACORUS. Sweet-flag. *Aroideæ*.

A. *calamus*: spadix protruding from the side of an ensiform leaf.

HAB. Swamps. June. 4. *Root creep., arom.; leav. rush-like; spad. greenish.*

252. JUNCUS. Rush. *Junceæ*.

* *Scapes naked; flowers lateral.*

1. *J. effusus*: scape minutely striate, (soft;) panicle loose, very much branched, spreading; leaflets of the perianth lanceolate, acuminate, rather longer than the obovate obtuse capsule.

HAB. Low grounds. June. 4. *Scape 2—3 ft high; stam. 3; seeds attenuate.*

2. *J. setaceus*: scape filiform, striate, umbel. lateral, compound, few-flowered; peduncles many-flowered; leaflets of the perianth subulate.

HAB. Swamps. 4. *Scape slend., 2 ft. high; pan. small; caps. acute.*

3. *J. acutus*: scape naked, terete, panicle lateral; involucre 2-leaved, spinous; capsule nearly round, mucronate, as long again as the perianth.

HAB. Sandy sea-coast. 4. *Stem in subdistich. fascic., 2—3 ft. high; seeds ang.*

* *Leaves all radical; (flowers terminal.)*

4. *J. squarrosus*: leaves setaceous, (rigid,) grooved; panicle terminal, elongated, compound; capsules elliptical.

HAB. New-York. +.

5. *J. tenuis*: stem erect, filiform, a little dichotomous at the summit, nearly terete; leaves setaceous, canaliculate; flowers solitary, approximate, subsessile; perianth longer than the obtuse capsule.

HAB. Wet or dry places. June—July. 4. *A foot high, tenacious; pan. subcorymb.*

6. *J. nodosus*: stem somewhat leafy; leaves nodose-articulate; heads mostly 2, globose, one of them lateral and pedunculate, the other sessile; leaflets

of the perianth mucronate, shorter than the acuminate capsule.

HAB. Wet places. July. 4. Stem 8—10 in. high; heads 8—12 fl., 1 sess.

*** *Stems leafy.*

† *Leaves nearly plane, grooved above.*

7. *J. marginatus*: leaves flat, smooth; corymb terminal, simple, proliferous; heads 5—10-flowered; flowers triandrous; leaflets of the perianth about as long as the obtuse capsule; the exterior ones and the bracts subaristate.

HAB. Low grounds. Aug. 4. Stem 12—18 in. high; leav. mostly rad.; Stam. 3.

8. *J. trifidus*: sheaths ciliate; those at the base of the stem leafless; bracts foliaceous, very long, grooved; heads about 3-flowered, terminal, stem 1-leaved.

HAB. High mountains. Aug. 4. Six in. high; leaf nearly term., setac.

9. *J. bulbosus*: stem simple leafy, compressed; leaves linear-setaceous, canaliculate; panicle terminal, compound, subcymose, shorter than the involucre; leaflets of the perianth incurved, obtuse or acute, generally shorter than the ovate, subglobose capsule.

HAB. Salt marshes. Aug.—Sept. 4. A foot high, wiry; caps. dark brown.

10. *J. bufonius*: stem dichotomous above, paniculate; leaves filiform, setaceous, canaliculate; flowers subsolitary, sessile, unilateral, leaves of the perianth very acuminate, much longer than the elliptical ovate capsule.

HAB. Wet places. June—Aug. ☉. Stem 3—6 in. high; sheaths membran.

†† *Leaves rounded or subcompressed.*

11. *J. acuminatus*: stem leafy, erect; leaves terete, nodose-articulate; panicle terminal, compound; heads 3—6-flowered, pedunculate and sessile;

leaflets of the perianth linear-lanceolate, subaristate, shorter than the acute capsule.

HAB. Bogs. Aug. 4. Stem 18 in. high, tenac.; caps. triquet.

12. *J. polycephalus*: stem leafy, erect; leaves compressed, nodose-articulate; panicle decompose; heads globose, many-flowered; flowers triandrous; leaflets of the perianth subaristate, rather shorter than the triquetrous acute capsule.

HAB. Bogs. Aug.—Sept. 4. Stem 18 in.—2 ft. high, subcompress. below; heads 12—15-fl. stam. 3, (rarely 6.)

13. *J. subverticillatus*: Cauline leaves subulate, nodose-articulate; panicle corymbose; heads about 5-flowered, fasciculate-verticillate; leaflets of the perianth striate, as long as the obtuse capsule.

HAB. Bogs. July. 4. Stem 8—12 in. long, slender; heads 3—5 fl.

253. LUZULA. *Junceæ*.

1. *L. pilosa*: leaves hairy; panicle subcymose; peduncles 1-flowered, reflexed; leaflets of the perianth acuminate, rather shorter than the obtuse capsule.

HAB. Mountains. Apr.—May. 4. Stem 6 in. high, slender; pedic. capill.

2. *L. campestris*: leaves hairy; spikes sessile and pedunculate; leaflets of the perianth acuminate, longer than the obtuse capsule.

HAB. Low grounds and woods. Apr.—May. A foot high; spik. roundish.

3. *L. melanocarpa*: culm leafy; leaves sub lanceolate, smooth; panicles capillary, loose; flowers solitary, distinctly pedicellate; capsules black.

HAB. High Mountains. July. 4. A foot high; pedicels solit.; caps. oblong.

4. *L. spicata*: leaves narrow, hairy at the throat; spike cernuous, compound; leaflets of the perianth acuminate-aristate, about as long as the roundish capsule.

HAB. High Mountains. Aug. 4. A foot high; spikelets bract. ferrug.

TRIGYNIA.

254. MELANTHIUM. *Melanthaceæ*.

1. *M. virginicum*: panicle pyramidal, petals oval, somewhat hastate, flat; flowers mostly perfect.

HAB. Wet Meadows. July—Aug. 4. Stem 3 ft. high; pan. large, loose; fl. polygamo-dioic., greenish wh., at length brown.

2. *M. dioicum*: root a tunicated bulb; leaves glaucous, gramineous, margined; raceme mostly simple, few-flowered; flowers perfect; petals roundish, unguiculate, with two spots; seeds subulately winged.

HAB. Banks of Rivers. July—Aug. A foot high, fl. whitish.

3. *M. hybridum*: panicle racemose, petals suborbicular, plaited, with long claws; glands connate.

HAB. Pennsylvania. Stem 2 ft. high; leav. long-lin. fl. not changing.

255. VERATRUM. Green and White Hellebore. *Melanthaceæ*.

V. viride: racemes paniculate; bracts of the branches oblong-lanceolate; partial ones longer than the subpubescent peduncles; leaves broad-ovate, plicate.

HAB. Swamps. June—July. Root large; stem 3—4 ft. high; fl. green.

256. HELONIAS. *Melanthaceæ*.

1. *H. latifolia*: scape leafless; spike ovate, crowded; bracts linear-lanceolate, leaves lanceolate, mucronate, nerved.

HAB. Swamps. May. Fl. pale purp.; anth. blue.

2. *H. erythrosperma*: scape leafy; leaves linear, very long; raceme oblong; bracts short; capsule shortened, with divaricate horns; seeds ovate, red.

HAB. Shady river banks and mountains. June. 4.

Root bulb. ; stem 2 ft. high, fl. wh. ; seeds with a scarlet coat.

3. *H. angustifolia* : scape leafy ; leaves very long and narrow ; raceme oblong, lat. ; capsule oblong ; seeds linear.

HAB. New-York. *Root fibr. ; stem 2 ft. high ; racem. simp. ; fl. wh.*

4. *H. dioica* : scape leafy ; racemes dioicous, spiked, cernuous ; pedicels very short, without bracts ; petals linear ; stamens exserted ; leaves lanceolate.

HAB. Wet meadows. June. *Root præmorse, stem 1—2 ft. high ; fl. white.*

257. XEROPHYLLUM. *Melanthaceæ.*

- X. setifolium* : raceme oblong, crowded ; bracts setaceous ; filaments dilated at the base, as long as the corolla ; leaves subulate setaceous.

HAB. Pine barrens. June. 4. *Root subbulb. ; rad. leav. long, cespit. ; fl. white.*

258. TOFIELDIA. *Melanthaceæ.*

- T. pubens* : flowers on a scape, rachis and pedicels scabrous ; spike oblong, interrupted ; capsules subglobose, scarcely longer than the calyx.

HAB. Delaware. 4. *Leav. narrow-ensif., subradic. : scape 18 in. high ; spike gr. wh.*

259. SCHEUCHZERIA. *Juncagineæ.*

S. palustris.

HAB. Swamps. 4. July. *Root horiz. stem 8—12 in. high ; leav. lin. ; racem. 5—7 fl. ; fl. peduncul. gr. yell. ; caps. large.*

260. TRIGLOCHIN. Arrow-grass. *Juncagineæ.*

1. *T. maritimum* : fruit ovate-oblong, of 6 united capsules.

HAB. Salt marshes and about salt springs. July—

Aug. 24. *Leav. rad., narrow, rush like ; spike very long.*

2. *T. palustre*: flowers triandrous ; fruit of 3 united capsules, nearly linear, attenuate at the base.

HAB. Marshes. July. 4. *Leav. very narrow ; scape slender ; 12 in. high.*

261. GYROMIA. Indian Cucumber. *Asparagææ.*

G. virginica.

HAB. Moist woods. May—June. 24. *Root tub., stem simp. ; leav. verticill. ; fl. yell.*

262. TRILLIUM. American Herb Paris. *Asparagææ.*

1. *T. sessile*: flower sessile, erect ; petals lanceolate, twice as long as the calyx ; leaves sessile, broad oval, acute.

HAB. Shady rocks. 4. *Root præmorse, and fib. ; fl. and ber. purp.*

2. *T. erythrocarpum*: peduncles somewhat erect ; petals oval-lanceolate, acute, recurved, nearly as long again as the narrow calyx ; leaves ovate, acuminate, rounded at the base ; abruptly contracted into a short petiole.

HAB. Sphagnous swamps. May. 4. *Stem 8 in. high ; fl. wh. with purp. veins.*

3. *T. pusillum*: peduncle erect ; petals scarcely longer than the calyx ; leaves oval oblong, obtuse, sessile.

HAB. Pennsylvania. *Plant small ; pet. pale flesh col.*

4. *T. cernuum*: peduncle recurved ; petals lanceolate, acuminate, flat, recurved, of the length and breadth of the calyx ; leaves dilated-rhomboid, abruptly acuminate, on short petioles.

HAB. Shady woods. May. 4. *Stem 12—18 in. high ; fl. wh. ; ber. large, purp.*

5. *T. erectum*: peduncle inclined ; flower nodding ; petals ovate, acuminate, flat, spreading, broader and a little longer than the calyx ; leaves broad-rhomboid, acuminate, sessile.

HAB. Rich soil, among rocks. May. 4. *A ft. high ; fl. large, dark purp.*

β. *album* : flowers smaller, petals white.

6. *T. pendulum* : peduncle inclined ; flower pendulous ; petals ovate, shortly acuminate, flat, spreading, nearly equal to the ovate acuminate calyx ; leaves roundish-rhomboid ; acuminate subsessile.

HAB. Mountains. May. 4. *A foot high ; leav. acute at base ; fl. wh. veined.*

7. *T. grandiflorum* : peduncle inclined ; flower somewhat erect ; petals spathulate-lanceolate, connivent at the base, much longer than the calyx ; leaves broadly rhomboid-ovate.

HAB. Rocky woods. 4. May. *Stem. 8—10 in. high ; leav. sess ; fl. large, wh.*

263. RUMEX. Dock. *Polygonæ.*

* *Flowers all perfect ; valves graniferous.* LAPATHUM.

† Valves entire.

1. *R. aquaticus* : valves ovate, entire, all of them graniferous ; leaves lanceolate, all of them cordate at the base.

HAB. Wet places. June. *Root large, astring. ; stem 3—4 ft. high ; grains linear. § ?*

2. *R. crispus* : valves very large, cordate, entire, reticulate, graniferous ; leaves lanceolate, undulate, acute.

HAB. Meadows. June. *Root yell. ; stem 2—3 ft. high ; grains unequal, §.*

3. *R. sanguineus* : valves oblong, small, one of them graniferous ; leaves lanceolate, subcordate.

HAB. Fields. June. *Stem 2—3 ft. high ; leav. mostly varieg. with red, §.*

4. *R. Britannica* : valves all entire and graniferous ; whorls of flowers leafless ; leaves broad-lanceolate, flat, smooth ; sheaths obsolete.

HAB. Wet places. June. *Root large, dark ext., yell. int. ; stem 2—3 ft. high.*

5. *R. verticillatus* : valves entire, all of them granife-

rous ; racemes leafless ; leaves lanceolate ; sheaths cylindrical.

HAB. Wet places. June. *Root large ; stem 2 ft. high ; fl. semiverticil.*

† † Valves toothed.

6. *R. acutus* : valves oblong, somewhat toothed, all of them graniferous ; leaves cordate-oblong, acuminate, whorls leafy.

HAB. Waste places. May. *Stem 2—3 ft. high ; lower leav. large, §.*

7. *R. obtusifolius* : valves dentate, one of them conspicuously graniferous ; radical leaves ovate-cordate, obtuse ; stem somewhat scabrous.

HAB. Woods and fields. June—July. *Root brown ext., yell. int. ; rad. leav. very large, §.*

* * *Flowers diœcious ; valves grainless. ACETOSA.*

8. *R. Acetosella* : leaves lanceolate-hastate, with the lobes spreading or recurved.

HAB. Fields. May—July. *Stem 4—12 in. high ; plant acid. §. Pist. Fl. rare.*

TETRAGYNIA.

264. SAURURUS. Lizard's-tail. *Najades?*

S. cernuus.

HAB. In water. July—Aug. 4. *Stem 18 in.—2 ft. high ; leav. alt., petiol. cordate, spike 3—6 in. long, white, cal. tub.*

POLYGYNIA.

265. ALISMA. Water-Plantain. *Alismaceæ.*

1. *Plantago* : leaves ovate-cordate, acute or obtuse, 9-nerved ; flowers in a compound verticillate panicle ; fruit obtusely triangular.

HAB. In water. July—Aug. 4. *Leav. rad. 9-nerv. ; petiol. ; pan. large ; fl. wh.*

3. *parviflora* : leaves oval, 5—7-nerved, acuminate ; flowers very small.

HEPTANDRIA.

MONOGYNIA.

266. TRIENTALIS. *Cal.* 7-leaved. *Cor.* 7-parted, equal, flat. *Berry* dry, 1-celled, many-seeded.
267. ÆSCULUS. *Cal.* 1-leaved, 4—5-toothed, ventricose. *Cor.* 4—5-petalled. *Pet.* unequal, pubescent, inserted upon the calyx. *Caps.* 3-celled. *Seeds* large, solitary.

MONOGYNIA.

266. TRIENTALIS. Chick-weed winter-green.
Primulaceæ.

T. americana: leaves narrow-lanceolate, acuminate, serrulate; petals acuminate.*

HAB. Woods and swamps. 4. May—June. *Leav.* whorled; *fl. sol.*, wh.

267. ÆSCULUS. Horse-chesnut. *Aceraceæ.*

Æ. glabra: leaves quinate, very smooth, corolla 4-petalled, spreading, with the claws as long as the calyx; stamens longer than the corolla; fruit spinous.

HAB. Woods. May. 2. A large shrub; *fl.* large, yel. wh., panicul.

OCTANDRIA.

MONOGYNIA.

* *Flowers superior.*

268. RHEXIA. *Cal.* urceolate, 4—5-cleft. *Pet.* 4, inserted upon the calyx. *Anth.* incumbent, attached to the filaments behind, naked at the base. *Caps.* setigerous, 4-celled, free in the ven-

* These characters, pointed out by Dr. Bigelow, I am now satisfied, will distinguish the N. American Trientalis from the European.

tricose calyx. *Recept.* lunulate, pedicellate.
Seeds numerous.

269. **ŒNOTHERA.** *Cal.* tubular, 4-cleft; segments deflexed, deciduous. *Pet.* 4. *Stig.* 4-cleft. *Caps.* 4-celled, 4-valved. *Seeds* naked, affixed to a central, 4-sided receptacle.
270. **GAURA.** *Cal.* 4-cleft, tubular. *Cor.* 4-petalled, ascending. *Nut* quadrangular 1-seeded.
271. **EPILOBIUM.** *Cal.* 4-cleft, tubular. *Cor.* 4-petalled. *Caps.* oblong, inferior. *Seeds* comose.
272. **OXYCOCCUS.** *Cal.* superior, 4-toothed. *Cor.* 4-parted; segments sublinear, revolute. *Filam.* connivent; *Anth.* tubular, 2-parted. *Berry* many-seeded.

** *Flowers inferior.*

273. **MENZIESIA.** *Cal.* 1-leaved. *Cor.* monopetalous, ovate. *Filam.* inserted into the receptacle; *anth.* awnless. *Caps.* superior, 4-celled; dissepiments formed by the inflexed margins of the valves. *Seeds* numerous, oblong.
274. **ACER.** Flowers mostly polygamous. *Cal.* 5-cleft. *Pet.* 5 or 0. *Samaræ* 2, winged, united at the base, by abortion 1-seeded.
275. **DIRCA.** *Cal.* 0. *Cor.* tubular; border obsolete. *Stam.* unequal, exserted. *Berry* 1-seeded.
276. **JEFFERSONIA.** *Cal.* 4—5-leaved. *Cor.* 8-petalled. *Caps.* obovate, substipitate 1-celled, opening below the summit by a semicircular foramen. *Seeds* numerous, arillate at the base.

TRIGYNIA.

277. **POLYGONUM.** *Perianth* 5-parted, petaloid, inferior. *Nut* 1-seeded, mostly angular.

MONOGYNIA.

268. **RHEXIA.** *Melastomaceæ.*

1. *R. virginica*: stem with winged angles, somewhat hairy; leaves sessile, ovate-lanceolate, serrate-

ciliate, sprinkled with appressed hairs on both sides.

HAB. Wet meadows. July—Aug. 4. *Stem quad. 1 ft. high; fl. large, purp.*

2. *R. mariana*: very hairy; leaves lanceolate-acute at each end, 3-nerved, subpetiolate; calyx tubular, nearly smooth.

HAB. Bogs and wet woods. Aug. 4. *A foot high; stem subterete; fl. purp.*

3. *R. ciliosa*: stem subquadrangular, smooth; leaves subpetiolate, oval, smooth beneath, slightly hispid above; margin serrulate-ciliate; flowers involucrate.

HAB. Delaware. *A foot high, slend.; leav. small; fl. purp.; pet. roundish.*

269. CENOTHERA. Night willow-herb. *Onagrarice.*

* *Capsule elongated, sessile.*

1. *Æ. biennis*: stem villous and scabrous; leaves ovate-lanceolate, flat, dentate; flowers somewhat spiked, sessile: stamens shorter than the corolla.

HAB. Fields. June—Oct. ☉ ♂. *Stem 3—5 ft. high; leav. alt.; fl. racem., yellow.*

2. *Æ. muricata*: stem purplish, muricate; leaves lanceolate, flat; stamens longer than the corolla.

HAB. Fields. *Fl. smaller.*

3. *Æ. parviflora*: stem smooth, subvillous; leaves ovate-lanceolate, flat; stamens longer than the corolla.

HAB. Fields and woods. ♂. +.

4. *Æ. grandiflora*: stem nearly smooth, branched; leaves ovate-lanceolate, smooth; stamens declinate.

HAB. Fields. July—Aug. ♂. *Stem 3—5 ft. high, terete; fl. large, yellow.*

5. *Æ. sinuata*: stem diffused, pubescent; leaves oval-oblong, sinuate-dentate; flowers axillary, villous; capsule prismatic.

6. *minima*: stem humble, simple, 1-flowered; leaves entire.

HAB. Sandy fields. ☉. 1—3 in. high, 1—2 fl. small, sess. ; caps. lin.

** *Capsule ventricose, angular, mostly pedicellate.*

6. *Æ. fruticosa* : somewhat villous ; leaves linear-lanceolate, subdentate, acute ; petals broad-obcordate ; capsules oblong-clavate, pedicellate, quadrangular ; raceme naked below.

HAB. Hills and woods. June. ☉. Stem 12—18 in. high, purp. ; leav. punc.

- β. *ambigua* : more or less pilose ; stem simple ; leaves lanceolate or ovate-lanceolate, acute, subdenticulate ; petals obcordate, longer than broad ; points of the calyx very short ; capsules subsessile, always smooth, oblong and 4-winged ; raceme naked below.

HAB. Hills and dry woods. July. Leaves $2\frac{1}{2}$ in. long.

7. *Æ. incana* : stem slender, erect ; leaves flat, hoary and tomentose, very entire, elliptic-ovate, acute ; raceme few-flowered, naked ; capsules subsessile, oblong and quadrangular.

HAB. Dry Woods. Stem 6—8 in. high ; fl. bright yellow. +.

8. *Æ. pumila* : smooth ; stem ascending ; leaves lanceolate, very entire, obtuse ; capsule subsessile, elliptical-obovate, angular.

HAB. Dry fields. June. 4. A span high : fl. small ; pet. obcordate.

9. *Æ. chrysantha* : stem slender, pubescent ; leaves lanceolate, rather obtuse, flat, entire ; segments of the calyx as long again as the tube ; capsule clavate, sessile, acutely angular.

HAB. Mountains. A foot high ; fl. small, bright yellow.

10. *Æ. pusilla* : subpubescent ; stem nearly simple ; leaves lanceolate-oblong, somewhat obtuse, entire ; flowers axillary at the summit ; capsule sessile, clavate-turbinate, almost equally 8-angled.

HAB. Mountains. Stem 4—6 in. high, erect.

270. GAURA. *Onagrarieæ*.

G. biennis: leaves lanceolate, dentate; spikes crowded; fruit roundish, subquadrangular, pubescent.

HAB. Banks of rivers. Aug. ♂. Stem $1\frac{1}{2}$ —2 ft. high, hairy; fl. num. rose-col.

271. EPILOBIUM. Willow-herb. *Onagrarieæ*.

1. *E. spicatum*: leaves scattered, veined, smooth; flowers subspicate; stamens declinate.

HAB. Swamps. Aug. ♀. Stem 3—5 ft. high, terete; cal. col.; fl. large purp.

2. *E. coloratum*: stem terete, pubescent; leaves lanceolate, serrulate, petiolate, opposite, smooth, with coloured veins; the upper ones alternate.

HAB. Wet places. July—Aug. ♀. Stem 3—4 ft. high; upper bran. subquadrang.; fl. axill. purp.; caps. 2—3 in. long.

3. *E. rosmarinifolium*: stem terete, pubescent, branching above; leaves linear, very entire; those on the stem opposite; on the branches alternate; flowers pedunculate; petals bifid; stigma entire.

HAB. Swamps. Aug. ♀. Root bulb. and scaly; fl. very small, pale purp.

4. *E. molle*: densely and softly pubescent; stem terete; leaves oblong linear, sessile, very entire; the lower ones opposite; upper ones alternate; flowers pedicellate, subterminal, regular; petals 2-lobed; stigma entire.

HAB. Wet grounds. Aug. ♀. Stem 18 in. high, branch. above; silky pubes.; fl. small, pale purp.

272. OXYCOCCUS. Cranberry. *Vaccineæ*.

1. *O. macrocarpus*: creeping; branches ascending; leaves oblong, nearly flat, obtuse, with distant obsolete serratures, glaucous beneath; pedicels elongated; segments of the corolla linear-lanceolate.

HAB. Sphagnous swamps. June. 4. *Stem long, filif. ; fl. red ; ber. scarl.*

2. *O. vulgaris*: leaves ovate, entire, revolute ; segments of the corolla oval ; stem filiform, creeping, naked.

HAB. Mountain bogs. 4. +.

273. MENZIESIA. *Ericææ*.

1. *M. cærulea*: leaves scattered, crowded, linear, toothed ; pedicels terminal, aggregate, 1-flowered ; flowers campanulate, decandrous, 1-flowered, calyx very acute.

HAB. High mountains. July. 2. *Evergreen, branch. ; fl. large, purp.*

2. *M. globularis*: leaves lanceolate, glaucous beneath, except the nerves, pubescent ; calyx 4-cleft ; flowers globose, octandrous.

HAB. Mountains. June. 2. *Stem 4 in. high ; fl. yell. brown.*

274. ACER. Maple. *Aceraceæ*.

1. *A. rubrum*: leaves palmately about 5-lobed, cordate at the base, unequally and incisely toothed, glaucous beneath ; the sinuses acute ; flowers aggregated in about fives, on rather long pedicels ; germens glabrous.

HAB. Woods. April. *A large tree ; precocious ; fl. red ; stam. 5—6.*

2. *A. dasycarpon*: leaves palmately 5-lobed ; truncate at the base, incisely toothed, smooth and whitish beneath ; sinuses obtuse ; pedicels short ; germens tomentose.

HAB. Banks of rivers. April. *A large tree ; fl. gr. yel. : pet. 0 ; fruit large.*

3. *A. barbatum*: leaves ovate-cordate, with 3 short lobes, unequally serrate, glaucous beneath, and pubescent on the nerves ; peduncles hairy ; those of the stamiferous flowers branched : of the pistiliferous simple ; wings of the samaræ erect.

HAB. Cedar swamps. *A small tree ; leav. small ; fl. pale green. +.*

4. *A. saccharinum*: leaves palmately 5-lobed, subcordate at the base, acuminate, glaucous beneath; peduncles corymbose, nodding.

HAB. Woods. April. *A large tree; fl. yellowish on filif. ped.; wings narrow.*

5. *A. nigrum*: leaves palmately 5-lobed, cordate, with the sinus closed; lobes divaricate, sinuate-subdentate, pubescent beneath; flowers corymbed; samaræ turgid, subglobose.

HAB. Mountainous regions. April. *A large tree; fl. yellowish on filif. ped., apert.*

6. *A. pennsylvanicum*: leaves with 3 acuminate lobes, rounded at the base, acutely dentate, smooth; raceme simple, pendulous.

HAB. Mountains. May. *Shrub ten ft. high; bark striped; fl. gr. yell., large.*

7. *A. montanum*: leaves somewhat 5-lobed, acute, dentate, pubescent beneath; racemes compound, erect.

HAB. Mountains. May. *Shrub 6—10 ft. high; leav. small; fl. greenish.*

- † *Flowers diœcious. Calyx minute, 5-toothed. Petals 0. stamens 5; anthers linear, sessile, acuminate. Samaræ as in Acer.*—NEGUNDIUM.

8. *A. Negundo*: leaves pinnate and ternate, unequally serrate.

HAB. River banks. April. *A large tree; leaflets 5—7; racem. pend.*

275. DIRCA. Leather-wood. Thymeleæ.

D. palustris:

HAB. Woods. April. *Shrub 2 ft. high, with tough bran.; fl. and bark yellow.*

276. JEFFERSONIA. Podophyllaceæ.

J. diphylla.

HAB. Fertile woods. 4. *Leaf binate, petiol.; scape 1 ft. high, fl. sol. term., large, white; caps. large, coriaceous.*

TRIGYNIA.

277. POLYGONUM. Persicaria, &c. *Polygoneæ*.* *Flowers axillary.*

1. *P. aviculare*: stamens 8, styles 3, leaves lanceolate, scabrous on the margin; nerves of the stipules distant; stem procumbent, herbaceous.

HAB. Fields, &c. May—Oct. ☉. *Much bran.; fl. very small, wh. or reddish: seed striate.*

2. *P. glaucum*: flowers octandrous; styles 3; leaves lanceolate, thick and glaucous, revolute on the margin; stipules lacerate; pedicels exserted; stem diffuse, procumbent; seed acutely angular, smooth and shining.

HAB. Sandy sea-shore. Aug. ☉? *Stem long, sublig.; fl. larger than No. 1, rose-col.*

3. *P. tenue*: stem slender, erect, branched, acutely angular; flowers alternate, subsolitary; leaves linear, acuminate, straight; stipules tubular, lacerate, with the segments finely attenuate at the extremity.

HAB. Rocks and sandy fields. July—Sept. ☉. *Stem 6—10 in. high; ang. scab.*

** *Flowers spiked.*

- †. *Spike solitary, terminal; stamens; stigmas 3, nut triangular.* BISTORTA.

4. *P. viviparum*: stem simple; spike linear, solitary; leaves linear-lanceolate, revolute on the margin; the lower ones elliptical, petiolate.

HAB. High mountains. Aug. ♀. *Stem 6—8 in. high; stip. tub., smooth; fl. red.*

- †† *Spikes axillary or terminal; stamens 5—8; stigmas mostly 2; nut ovate.* PERSICARIA.

5. *P. punctatum*: flowers octandrous, glandular-punctate; styles 3-parted; stipules slightly hairy, ciliate; spike filiform, at first cernuous; leaves lanceolate, with pellucid punctures, scabrous on the margin and midrib.

HAB. Wet places. Aug.—Oct. 4. Stem $1\frac{1}{2}$ ft. high; fl. wh.—plant acrid.

6. *P. mite*: flowers octandrous, somewhat crowded; styles 3-parted; leaves narrow-lanceolate, somewhat hairy; stipules hairy, with long ciliæ.

HAB. Wet places. Aug.—Sept. 4. Stem 18 in. high, fl. pale red or white; plant not acrid.

7. *P. virginianum*: flowers 4-cleft, unequal, remote, pentandrous; styles 2; spike very long, virgate; leaves oval-lanceolate.

HAB. Moist shady places. Aug.—Sept. 4. Stem 2—4 ft. high, fl. white; fr. birost.

8. *P. amphibium*: flowers pentandrous; styles bifid; spike oblong or ovate; leaves petiolate, oblong or lanceolate, subcordate.

α. terrestre: stem nearly erect; leaves oblong-lanceolate, often cordate at the base, smooth above, slightly pubescent beneath; spike ovate-oblong.

HAB. Borders of ponds. Aug. 4. Stem assurg., 3 in. high; spike bright rose-col.

β. aquaticum: leaves floating, ovate-lanceolate; spike cylindrical-oblong.

HAB. Floating in lakes. Aug. 4. Stem 3—10 ft. long, branch.; fl. rose-col.

9. *P. pennsylvanicum*: flowers octandrous; style 2-cleft; spike oblong, crowded; peduncles hispid; leaves lanceolate, slightly hairy; stipules smooth and naked.

HAB. Fields, and along ditches. July—Oct. ☉ Stem 2—4 ft. high; leav. pale gr.; fl. red.

10. *P. lapathifolium*: flowers hexandrous; styles 2; spikes oblong, rather crowded, erect; peduncles scabrous; leaves ovate-lanceolate, on short petioles, hoary.

HAB. Wet places. Aug. ☉. Stem 2—4 ft. high, leav. pale green.

11. *P. Persicaria*: flowers hexandrous: styles bifid; spikes ovate-oblong, erect; peduncles smooth; leaves lanceolate; stipules smooth, ciliate.

HAB. Low grounds. July—Aug. ☉. Stem 1—2 ft. high; spikes dense, rose-col.

12. *P. orientale*: flowers heptandrous, digynous, leaves ovate; stem erect; stipules hairy, hypocrateriform.

HAB. Road sides, &c. Aug.—Sept. ☉. Stem 3—5 ft. high, pubes.; spik. subpend, rad.

*** *Flowers in paniculate spikes; perianth 5-leaved.*
POLYGONELLA.

13. *P. articulatum*: flowers perfect, octandrous, trigynous, nodding; spikes paniculate, filiform; pedicels solitary, articulate near the base; bracts imbricate; leaves linear; nut triquetrous.

HAB. Barren sandy woods. Sept. ☉. A foot high, branched; bracts trunc.; fl. rose-col.

**** *Flowers in racemose panicles; (leaves subcordate or sagittate.)* FAGOPYRUM.

14. *P. Convolvulus*: flowers octandrous; styles 3-cleft; leaves oblong, hastate-cordate; stem climbing, angular, somewhat scabrous; segments of the perianth obtusely carinate.

HAB. Sandy fields, &c. July—Sept. ☉. Leav. petiol.; raceme interrupt.; fl. reddish.

15. *P. cilinode*: flowers octandrous; styles 3-cleft; leaves cordate; stipules rather acute, ciliate at the base; stem angular, climbing or prostrate, pubescent; segments of the perianth obtusely carinate.

HAB. Hills. Aug. ☉. Plant minutely pubes.; leav. subhast.; fl. pale rose-col.

16. *P. scandens*: flowers octandrous, trigynous; leaves broadly cordate; stipules truncate, naked; stem climbing, smooth; segments of the perianth winged.

HAB. Hedges, &c. Aug. ☉. Stem 4—5 ang., purp.; fl. large, aggreg. wh. or rose-col.

17. *P. sagittatum*: flowers octandrous, capitate; styles 3-cleft; leaves sagittate, stem retrorsely aculeate.

HAB. Wet thickets. July—Aug. ☉. Stem slend., prost.; fl. in sm. heads, white.

18. *P. arifolium*: flowers hexandrous, distinct; styles bifid; spikes few-flowered, leaves hastate; stem retrorsely aculeate.

HAB. Wet thickets. July—Sept. ☉. *Stem*
slend., prost., remotely acul. ; fl. rose-col.

ENNEANDRIA.

MONOGYNIA.

278. LAURUS. *Cal.* mostly 6-parted, petaloid. *Nect.* consisting of 3 bisetose glands surrounding the germen. *Stam.* 12; 6 of them interior, 3 of which are sterile and glanduliferous.

MONOGYNIA.

LAURUS. Sassafras, &c. *Laurineæ.*

1. *L. carolinensis*: leaves perennial, oval-lanceolate, coriaceous, glaucous beneath; peduncle simple, terminated by a fascicle of few flowers; exterior segments half as long as the interior.

HAB. Swamps of Cupressus disticha.—*A small tree ; leav. ent. ; fl. clust., yellow.*

* *Euosmus.*

Flowers polygamous or diœcious. *Cal.* 6-parted. *Nect.* 0. *Stam.* 9, fertile; 6 exterior naked; the 3 interior augmented by 6 infertile ones attached by pairs; *anth.* of the sterile *stam.* glanduloid. *Berry* 1-seeded. (Leaves deciduous.)

2. *L. Benzoin*: flowers in conglomerate umbels, diœcious; buds and pedicels smooth; segments cuneate-oboval, entire, whitish and subpubescent beneath.

HAB. Shady wet places. April. *An arom. shrub 4—10 ft. high, fl. yellow ; berry scarl.*

3. *L. Sassafras*; flowers in conglomerate corymbs, diœcious; buds, younger branches, and under surface of the leaves pubescent; leaves entire, or 2—3-lobed; under surface prominently veined.

HAB. Woods. April. *A middle sized tree ; fl. gr. yellow ; ber. blue, on red ped.*

DECANDRIA.

MONOGYNIA.

* *Flowers monopetalous.*

279. **ARBUTUS.** *Cal.* minute, 5-parted. *Cor.* ovate, diaphanous at the base; border small, 5-cleft, revolute. *Filam.* hairy. *Berry* superior, 5-celled.
280. **GAULTHERIA.** *Cal.* 5-cleft, with 2 bracts at the base. *Cor.* ovate; border small, 5-cleft, revolute. *Filam.* hairy. *Recept.* 10-toothed. *Caps.* superior, 5-celled, covered by the calyx, which becomes a berry.
281. **VACCINIUM.** *Cal.* superior, 4—5-toothed. *Cor.* urceolate or campanulate, 4—5-cleft. *Filam.* inserted upon the germen. *Berry* 4—5-celled, many-seeded.
282. **ANDROMEDA.** *Cal.* 5-parted. *Cor.* ovate, or subcylindrical; border 5-cleft, reflexed. *Anth.* 2-horned. *Caps.* 5-celled, 5-valved; dissepiments from the middle of the valves.
283. **KALMIA.** *Cal.* 5-parted. *Cor.* hypocrateriform; border on the under side, producing 10 cornute protuberances, in which the anthers are concealed. *Caps.* 5-celled, many-seeded; dissepiments marginal.
284. **RHODODENDRON.** *Cal.* 5-parted. *Cor.* subinfundibuliform, 5-cleft. *Stam.* 5—10, declinate; *anth.* opening by 2 terminal pores. *Caps.* 5-celled, 5-valved, opening at the summit.
285. **RHODORA.** *Cal.* 5-toothed. *Cor.* 3-petalled; petals unequal, slightly united at the base; the upper one thrice broader, and 3-lobed. *Stam.* and style declinate. *Caps.* 5-celled, 5-valved, opening at the top; dissepiments formed of the inflexed margins of the valves.
286. **EPIGÆA.** *Cal.* 5-parted, with 3 bracts at the base. *Cor.* hypocrateriform; border 5-parted, spreading; tube villous within. *Caps.* 5-celled, receptacle 5-parted.

287. **PTEROSPORA.** *Cal.* 5-parted. *Cor.* monopetalous, ovate, margin 5-toothed, reflexed. *Anth.* excentrically peltate, 1-celled, bisetose. *Caps.* 5-celled, imperfectly 5-valved; dissepiments from the middle of the valves; septa and valves uniting toward the base, and coalescing with the receptacular axis. *Seeds* very minute and numerous, each furnished with a terminal wing.

*** Flowers polypetalous, regular.*

288. **MONOTROPA.** *Cal.* 3—5-parted, or 0. *Cor.* 5-petalled, cucullate at the base. *Anth.* 1-celled, bilabiate. *Caps.* 5-celled, 5-valved. *Seeds* numerous, invested with a long arillus.
289. **PYROLA.** *Cal.* small, 5-cleft. *Pet.* slightly united at the base, deciduous. *Stam.* opening with 2 pores. *Caps.* 5-celled, 5-valved. *Seeds* invested with a long arillus.
290. **LEDUM.** *Cal.* minute, 5-toothed. *Cor.* 5-petalled, spreading. *Stam.* exerted; *anth.* opening by 2 terminal pores. *Caps.* subovate, 5-celled, 5-valved, opening at the base; valves with the margins inflexed and approximate; *recept.* 5-lobed; *colum.* 5-angled, pedicellate. *Seeds* numerous, flat, linear, scabrous, with a membranaceous wing at each extremity.
291. **LEIOPHYLLUM.** *Cal.* deeply 5-parted, persistent. *Cor.* 5-petalled. *Stam.* longer than the corolla; *anth.* lateral, opening on the inside longitudinally. *Caps.* roundish, 5-celled, 5-valved, opening at the top; valves ovate, with the margins inflexed, remote and straight; *colum.* subovate, terete, rugose. *Seeds* small, smooth, not winged.
292. **CLETHRA.** *Cal.* 5-parted, persistent. *Cor.* 5-petalled. *Style* persistent; *stig.* short, 3-cleft. *Caps.* 3-celled, 3-valved, covered by the calyx.

**** Flowers polypetalous, irregular.*

293. **CASSIA.** *Cal.* 5-leaved. *Pet.* 5, subequal. *Stam.* unequal; 3 superior *anth.* sterile; 3 inferior rostrate, with longer and incurved filaments. *Legume* membranaceous, 2-valved.

294. BAPTISIA. *Cal.* half 4—5-cleft, bilabiate. *Cor.* papilionaceous; *pet.* nearly equal in length; *vexill.* with the sides reflexed. *Stam.* deciduous. *Legume* ventricose, pedicellate, many-seeded.
295. CERCIS. *Cal.* 5-toothed, gibbous at the base. *Cor.* papilionaceous; *wings* larger than the *vexill.*; *keel* 2-petalled. *Legume* compressed, seminiferous suture margined.

DIGYNIA.

296. HYDRANGEA. *Cal.* superior, 5-toothed, *Pet.* 5. *Caps.* 2-beaked, opening by a foramen between the horns.
297. SAXIFRAGA. *Cal.* 5-parted. *Pet.* 5. *Caps.* superior or inferior, or half inferior, 2-beaked, 2-celled, many-seeded, opening between the beaks.
298. CHRYSOSPLENIUM. *Cal.* superior, 4—5-cleft, coloured. *Cor.* 0. *Caps.* 2-beaked, many-seeded.
299. TIARELLA. *Cal.* 5-parted, persistent. *Pet.* 5, inserted into the calyx, unguiculate. *Caps.* 1-celled, 2-valved; valves unequal.
300. MITELLA. *Cal.* 5-cleft, persistent. *Pet.* 5, pinnatifid; inserted into the calyx. *Caps.* 1-celled, 2-valved; valves equal.
301. SAPONARIA. *Cal.* 1-leaved, tubular, 5-toothed, naked at the base. *Pet.* 5, unguiculate. *Caps.* oblong, 1-celled.
302. DIANTHUS. *Cal.* 1-leaved, tubular, 5-toothed, with about 4 imbricate opposite scales at the base. *Pet.* unguiculate. *Caps.* cylindric, 1-celled.
303. SCLERANTHUS. *Cal.* 1-leaved, 5-cleft. *Cor.* 0. *Stam.* inserted into the calyx. *Caps.* 1-seeded, covered by the calyx.

TRIGYNIA.

304. CUCUBALUS. *Cal.* 1-leaved, inflated, 5-toothed. *Pet.* 5, unguiculate, naked at the orifice. *Caps.* 3-celled.

305. *SILENE*. *Cal.* 1-leaved, tubular or conic, 5-toothed. *Pet.* 5, unguiculate, mostly crowned at the orifice. *Caps.* 3-celled, 6-toothed, many-seeded.
306. *STELLARIA*. *Cal.* 5-leaved. *Pet.* 5, deeply cleft. *Caps.* 1-celled, opening with 6 teeth, many-seeded.
307. *ARENARIA*. *Cal.* 5-leaved. *Pet.* 5, undivided. *Caps.* 1-celled, many-seeded.

PENTAGYNIA.

308. *SPERGULA*. *Cal.* 5-leaved. *Pet.* 5, undivided. *Caps.* ovate, 5-celled, 5-valved.
309. *CERASTIUM*. *Cal.* 5-leaved. *Pet.* 5, bifid or emarginate. *Caps.* 1-celled, bursting at the summit with 10 teeth.
310. *AGROSTEMMA*. *Cal.* 1-leaved, tubular, coriaceous, 5-cleft. *Pet.* 5, unguiculate; limb obtuse, undivided. *Caps.* 1-celled, opening with 5 teeth.
311. *OXALIS*. *Cal.* 5-parted, persistent. *Pet.* 5, slightly connected at the claws. *Caps.* pentangular, 5-celled, bursting at the angles; cells 2, or many-seeded. *Seeds* covered with an elastic arillus.
312. *PENTHORUM*. *Cal.* 5—10-cleft. *Pet.* 5 or 0. *Caps.* 5-pointed, 5-celled; cells dividing transversely, many-seeded.
313. *SEDUM*. *Cal.* 5-cleft. *Pet.* 5. *Caps.* 5, with a nectariferous scale at the base of each.

DECAGYNIA.

314. *PHYTOLACCA*. *Cal.* 5-cleft, petaloid. *Berry* superior, 10-celled, 10-seeded.

MONOGYNIA.

279. *ARBUTUS*. Bear-berry. *Ericææ*.

A. *Uva ursi*: stem procumbent; leaves cuneate-obovate, very entire, coriaceous; margin convex; flowers fasciculate; berries 5-seeded.

HAB. Sandy woods and mountains. Apr.—May. $\frac{1}{2}$. Evergreen; *fl.* rose-col.; *ber.* red.

280. GAULTHERIA. Mountain-tea, &c. *Ericææ*.

G. procumbens: stem procumbent, with the flowering branches erect; leaves obovate, cuneate at the base, ciliate-denticulate; flowers few, terminal, nodding.

HAB. Wet or dry woods. July—Aug. $\frac{1}{2}$. Root creep.; leav. *sempervir.* fl. wh.

281. VACCINIUM. Whortle-berry. *Vaccinææ*.

* *Leaves deciduous.*

† *Corolla campanulate.*

1. *V. stamineum*: leaves oval, acute, very entire, glaucous beneath; pedicels solitary, axillary, filiform; corolla spreading-campanulate; segments oblong, acute; anthers exserted, awned; berries somewhat pyriform.

HAB. Dry woods and hills. May—June. Shrub 3—4 ft. high; fl. wh.; ber. large, wh.

3. *album*: leaves subpubescent beneath; berries globose.

HAB. Pine barrens.

2. *V. dumosum*: younger branches, leaves, and racemes sprinkled with resinous atoms; leaves obovate, cuneate at the base, mucronate, very entire, green on both sides; racemes bracteate; pedicels short, axillary, subsolitary; corolla campanulate, segments rounded; anthers included.

HAB. Pine barrens and swamps. June. Shrub 12—18 in. high; fl. large, wh.; ber. large, depress. black.

3. *V. frondosum*: leaves obovate-oblong, obtuse, very entire, and sprinkled with resinous atoms beneath, glaucous; racemes loose, bracteate; pedicels long, filiform; corolla ovate-campanulate; anthers included.

HAB. Sandy woods and swamps. July. Shrub 3—5 ft. high, ber. large, blue, pleasant.

† † *Corolla urceolate.*

α. Flowers racemose, or fasciculate.

4. *V. resinosum*: leaves petiolate, oblong-oval, mostly obtuse, very entire, sprinkled with resinous atoms beneath; racemes lateral, secund, bracteate; corolla ovate-conic, pentangular.

HAB. Woods and hills. May—June. *Shrub 2 ft. high; fl. reddish; ber. black shining.*

5. *V. corymbosum*: floriferous branches nearly leafless; leaves oblong-oval, acute at each extremity, nearly entire; the younger ones pubescent; racemes short, sessile, bracteate; corolla cylindrical-ovate.

HAB. Low grounds. May—June. *Shrub 4—8 ft. high; fl. wh. or purplish; ber. black.*

6. *V. fuscatum*: racemes somewhat naked; leaves elliptical, acute, very entire, with the nerves beneath somewhat villous; corolla cylindrical-ovate; calyx acute.

HAB. Pennsylvania. +

7. *V. pennsylvanicum*: branches angular, green; sessile, oval-lanceolate, mucronate, serrulate, shining on both surfaces; fascicles of flowers crowded, subterminal, corolla ovate.

HAB. Rocky hills. May—June. *Shrub 12—18 in. high; bark and fl. greenish; ber. dark blue.*

8. *V. tenellum*: racemes bracteate, sessile; corolla ovate-cylindrical; leaves oblong-elliptic, subcuneiform, serrulate, nearly smooth.

HAB. Mountains. April.

9. *V. ligustrinum*: branches angular; leaves subsessile, erect, lanceolate, mucronate, serrulate; fascicles gemmaceous, sessile; flowers nearly sessile; corolla oblong, ovate.

HAB. Dry woods. *Shrub small, slend.; leaves $\frac{3}{4}$ in. long; fl. purp.*

β. Flowers solitary.

10. *V. uliginosum*: leaves obovate, very obtuse, en-

tire, smooth above, veined and glaucous beneath ; flowers subsolitary, octandrous ; corolla short-ovate, 4-cleft ; anthers awned at the base.

HAB. High Mountains. *Shrub procum. and strag. ; leav. and fl. small ; ber. obl.*

* * *Leaves sempervirent.*

11. V. *Vitis idæa* : stem creeping ; branches erect ; leaves obovate, punctate beneath ; nearly entire ; racemes terminal, nodding ; corolla oblong, campanulate.

HAB. High mountains. June. *Shrub low, strag. ; leav. subcoriac. rev. ; fl. mostly 4-cleft, pale red ; ber. red, acid.*

282. ANDROMEDA. *Ericææ.*

* *Leaves sempervirent.*

1. A. *hypnoides* : leaves imbricate, subulate, smooth ; peduncles solitary, terminal, 1-flowered, corolla nodding, globose campanulate.

HAB. High mountains. *A small creeping shrub ; fl. small, wh. and red.*

2. A. *polifolia* : leaves linear lanceolate, convex ; revolute, glaucous beneath ; flowers in short terminal racemes.

HAB. Sphagnous swamps. May. *Shrub 18 in. high ; fl. wh. urceol., mouth contr.*

3. A. *calyculata* : leaves lanceolate-oblong, rather obtuse, obsoletely serrulate, ferruginous beneath ; racemes terminal, leafy, subsecund ; calyx bi-bracteate ; corolla oblong-cylindrical.

HAB. Bog-meadows. Apr.—May. *Shrub 3—4 ft. high ; leaves squamulose-punct. ; fl. wh.*

* *Leaves deciduous.*

4. A. *mariana* : leaves oval, somewhat acute, very entire, smooth, subcoriaceous ; paler beneath ; flowering branches nearly naked ; pedicels fasci-

culate ; corolla ovate-cylindric ; anthers simple at the summit.

HAB. Sandy woods. June—Oct. *Shrub 2—4 ft. ; branch. erect ; fl. large, wh. or rose-col.*

5. *A. racemosa* : leaves oval-lanceolate, acute, serrulate, membranaceous, pubescent beneath ; racemes terminal, secund, simple, (or rarely branched ;) corolla oblong-cylindrical ; anthers 4-awned at the summit.

HAB. Swamps. June—July. *Shrub 4—6 ft. high ; racem. long ; fl. nod. ; wh. odorous.*

6. *A. arborea* : branches terete ; leaves oblong, acuminate, acutely serrate, smooth ; panicles terminal, many-spiked ; corolla ovate-oblong, pubescent ; anthers unawned.

HAB. Mountains. *A middle sized tree ; leav. shin., acid ; pan. large ; fl. wh.*

7. *A. ligustrina* : pubescent ; leaves obovate-lanceolate, acuminate, minutely serrulate, floriferous branches terminal, paniculate, naked ; corolla subglobose ; anthers unawned.

HAB. Swamps. June—July. *Shrub 4—8 ft. high ; pan. dense ; fl. small, wh. ; cap. glob.*

283. KALMIA. American Laurel. *Rhododeudraceæ.*

1. *K. latifolia* : leaves on long petioles, scattered and ternate, coriaceous, green on both sides ; corymbs terminal, viscidly pubescent.

HAB. Rocky hills. June—July. *Shrub 4—15 ft. high ; leav. semperv. ; fl. large, rose-col.*

2. *K. angustifolia* : leaves ternate, petiolate, obtuse, slightly ferruginous beneath ; corymbs linear ; peduncles and calyx glandular-pubescent.

HAB. Sandy woods and swamps. June—July. *Shrub 2 ft. high ; fl. smaller, deeper rose-col.*

3. *K. glauca* : branches ancipitous ; leaves opposite, subsessile, oblong, smooth, glaucous beneath, revolute on the margin, corymbs terminal and axillary, bracteate ; peduncles and calyx very smooth.

HAB. Sphagnous swamps and mountain bogs. July. *Shrub 18 in. high ; fl. small, rose-col.*

β. *rosmarinifolia*: leaves linear, conspicuously revolute, nearly green beneath.

HAB. Sphagnous swamps. *Shrub low; leav. 2 lin. broad; umbel. term.*

284. RHODODENDRON. Mountain-laurel. *Rhododendraceæ.*

* *Flowers pentandrous.*

1. *R. nudiflorum*: flowers somewhat naked; leaves lanceolate-oblong, nearly smooth, and green on both sides; the midrib bristly beneath; margin ciliate; flowers not viscous; tube longer than the divisions; teeth of the calyx short, somewhat rounded; stamens much exerted.

HAB. Woods and copses. May. *Shrub 2—6 ft. high; fl. in term. clust., red.*

2. *R. viscosum*: flowers leafy; branches hispid; leaves oblong-obovate, acute, smooth and green on both sides, ciliate on the margin; midrib bristly; flowers viscous; tube as long again as the segments; teeth of the calyx short, rounded; stamens scarcely longer than the corolla.

HAB. Wet woods. June. *Shrub 4—8 ft. high; fl. wh., viscous, sweet-scen.*

β. *glaucum*: leaves glaucous beneath.

3. *R. calendulaceum*: flowers somewhat naked; leaves oblong, pubescent on both sides, at length hairy; flowers not viscous; teeth of the calyx oblong; tube of the corolla hairy, shorter than the segments.

HAB. Pennsylvania. May. *Shrub 2—6 ft. high; fl. large, flame-col.*

4. *R. arborescens*: flowers leafy; leaves obovate, rather obtuse, smooth on both sides, glaucous beneath, ciliate on the margin; nerves almost smooth, flowers not viscous; tube longer than the segments; calyx leafy, with the segments oblong, acute; filaments exerted.

HAB. Mountains. *Shrub 10—20 ft. high; fl. large, rose-col.; scales of the fl.-buds yell-br., with a cil. white bord.*

5. *R. nitidum*: flowers leafy; branches somewhat smooth; leaves oblanceolate, submucronate, co-

riaceous, smooth on both sides, shining above; nerve bristly beneath; margin revolute-ciliate; flowers viscous; tube a little longer than the segments; calyx very short; filaments exserted.

HAB. Mountain swamps. *Leav. dark green, small; fl. reddish white.*

6. *R. trispidum*: flowers leafy; branches straight, very hispid; leaves long-lanceolate, hispid above, smooth beneath, glaucous on both sides; nerve beneath bristly; margin ciliate; flowers very viscous; tube scarcely longer than the segments; teeth of the calyx oblong, round; filaments exserted.

HAB. Mountains, near lakes. July—Aug. *Shrub 10—15 ft. high, bluish, upright; fl. wh., bord. and tube red.*

** *Flowers campanulate; stamens 5—10.*

7. *R. lapponicum*: leaves elliptical, roughened with excavated punctures.

HAB. High mountains. July. *A small evergreen shrub; fl. in term. clust., large purp., 4 cl.; stam. 8.*

8. *R. maximum*: arborescent; leaves oblong, acute, paler beneath; umbels terminal; segments of the calyx oval, obtuse; corolla campanulate.

HAB. Cedar swamps and mountain bogs. June—July. *Shrub 10—15 ft. high; leav. semperv.; fl. large, rose-col.*

285. RHODORA. *Rhododendraceæ.*

R. canadensis:

HAB. Mountain bogs. May. *Shrub 2 ft. high; leav. oval; fl. in term. umb., purplish; stam. not exsert.*

286. EPIGÆA. *Ground-laurel. Ericææ.*

E. repens: branches, nerves of the leaves, and petioles, very hairy; leaves cordate-ovate, very entire; corolla subcylindrical.

HAB. Rocky woods. April. 4. *A trailing evergreen; fl. clust., reddish wh.*

287. PTEROSPORA. *Monotropeæ*.*P. andromedea*.

HAB. Steril hill-sides. July—Aug. 4. ? Stem $1\frac{1}{2}$ —2 ft. high, simple, scaly, brownish; leaves 0; fl. in a long raceme, nutant, reddish white.

288. MONOTROPA. Bird's-nest. *Monotropeæ*.* *Scapes many-flowered*. HYPOPITHYS.

1. *M. lanuginosa*: scape bearing the flowers in a spike; bracts and flowers woolly.

HAB. Beech woods. Aug. 4. ? Scape scaly, ag-greg., 4—6 in. long; fl. secund, yellowish, parasitic on roots.

2. *Hypopithys*: scape bearing the flowers in a spike; scales and flowers smooth externally; lateral flow-ers octandrous.

HAB. Beech woods. July. 4. ? Plant dingy yellow. Parasitic. +.

** *Scape 1-flowered*.

3. *M. uniflora*: scape straight, elongated, 1-flowered; flowers decandrous, erect or cernuous.

HAB. Woods. June. Root roundish; plant white: scape 5—8 in. high; fl. large.

289. PYROLA. Winter-green. *Monotropeæ*.* *Flowers racemed, pointing in various directions*.

1. *P. rotundifolia*: leaves rounded or dilated oval, ob-soletely serrulate, subcoriaceous and shining; pe-tiole about as long as the lamina; scape many-flow-ered; style declinate.

HAB. Dry woods. July—Aug. 4. Leav. rad. semperv.; fl. large, reddish white.

2. *P. elliptica*: leaves membranaceous, elliptical-ovate; serrulate, rather acute; lamina longer than the pe-tiole; scape nearly naked; bracts subulate; calyx 5-toothed; style declinate.

HAB. Dry woods. July—Aug. 4. Scape 10 in. high, 1-bract.; fl. sw.-scent., gr. wh.

3. *P. asarifolia*: leaves subreniform, generally emarginate, coriaceous; lamina shorter than the petiole; scape mostly convolute, many-flowered; calyx appressed; stamens slightly ascending; style declinate, clavate.

HAB. Sandy woods. July. 4. *Leav. small, dark gr.; scape 8—10 in. high; bract solit.; fl. greenish, inodor.*

4. *P. minor*: leaves roundish-oval, serrulate; scape naked; style short, straight, as long as the erect stamens.

HAB. New-York, &c. June. 4. *Fl. small, reddish wh.; stig. pelt.*

** *Flowers racemed, secund.*

5. *P. secunda*: leaves roundish-ovate, acute, serrate; racemes secund; styles straight.

HAB. Sandy woods. June—July. 4. *Plant a span high; stem assurg.; fl. gr. wh.*

*** *Flower solitary, terminal.*

6. *P. uniflora*: leaves orbicular, serrate; scape 1-flowered; style straight.

HAB. Dry woods and sphagnous swamps. July. 4. *Fl. large, red. wh.*

**** *Flowers somewhat umbellate; styles very short.*

CHIMAPHILA.

7. *P. umbellata*: leaves cuneate-lanceolate, acute at the base, serrate, uniformly green, scape corymbed.

HAB. Dry woods. July. 4. *Stem ascend.; leav. coriac., semperv.; fl. purpl. white.*

8. *P. maculata*: leaves lanceolate, rounded at the base, remotely serrate, discoloured; scape 2—3-flowered.

HAB. Dry woods. July—Aug. 4. *Evergreen.; leav. varieg.; fl. purp. wh., nod.*

290. LEDUM. Labrador tea. *Rhododendraceæ.*

1. *L. latifolium*: leaves oblong, replicate on the mar-

gin, ferruginous-tomentose beneath ; stamens 5, as long as the corolla.

HAB. Sphagnous swamps. June. 4. *A small evergreen shrub ; fl. corymb., wh.*

2. *L. palustre* : leaves linear, revolute on the margin ; ferruginous-tomentose beneath ; stamens 10, longer than the corolla.

HAB. Borders of mountain lakes.

291. LEIOPHYLLUM. *Rhododendraceæ.*

L. buxifolium.

HAB. Pine barrens and high mountains. May. *A small evergreen shrub, erect ; leav. oval, half in. long ; fl. num. in term. umb., wh.*

292. CLETHRA. *Ericææ.*

C. alnifolia : leaves cuneate-obovate, acute, coarsely serrate, smooth and green on both sides ; racemes spiked, simple, bracteate, hoary-tomentose.

HAB. Swamps. Aug. *Shrub 4—8 ft. high ; leav. alt. ; fl. wh., sweet-scent.*

293. CASSIA. Wild-pea. *Leguminosæ.*

1. *C. marilandica* : nearly smooth ; leaves in 8 pairs, lanceolate-oblong, mucronate ; gland on the petiole obovate ; racemes axillary, many-flowered ; legume linear, arcuate.

HAB. Wet meadows. Aug. 4. *Stem 2—4 ft. high ; fl. yellow, in large axill. racem.*

2. *C. Chamæcrista* : smoothish ; leaves in many pairs, linear, with the gland on the petiole subpedicellate ; buds 2—3-flowered ; 2 of the petals spotted ; legume pubescent.

HAB. Sandy fields. June—May. ☉. *A foot high ; leav. somewhat sensitive ; fl. yellow, in bract. fascic. ; base of 3 pet. spotted.*

3. *C. nictitans* : stem spreading, pubescent ; leaves in many pairs, linear ; gland on the petiole pedicellate ; peduncles fasciculate, few-flowered ; flowers pentandrous ; stamens equal.

HAB. Sandy fields. Aug. ☉. *A foot high, slender; fl. very small, axill.*

4. *C. fasciculata*: nearly smooth; leaves at the summit in 9 pairs; gland sessile near the middle of the petiole; fascicles lateral, many-flowered; petals and stamens of the same colour; legume smooth.

HAB. Dry fields. June—Aug. ☉. *Fl. smaller than No. 2; leg. curved.*

294. BAPTISIA. Wild Indigo. *Leguminosæ.*

B. tinctoria: very smooth, much branched; leaves ternate, subsessile; leaflets rounded-obovate; racemes terminal, (flowers yellow;) legume on a long stipe.

HAB. Sandy woods. July.—Sept. 4. *Stem 2—3 ft. high, much branch. Dries black.*

295. CERCIS. Judas' tree. *Leguminosæ.*

C. canadensis: leaves roundish-cordate, acuminate, villous at the axils of the nerves; legumes on short footstalks.

HAB. Woods. April. *A small tree; leav. alt., large; fl. red, in small lat. fascic., præcoc.; leg. compress.*

DIGYNIA.

296. HYDRANGEA. *Saxifrageæ.*

1. *H. vulgaris*: leaves oblong-ovate, smooth beneath, obtuse at the base, acuminate, dentate; cymes naked.

HAB. Shady rocks. July. *Shrub 3—6 ft. high; leav. oppos.; fl. wh.*

2. *H. radiata*: leaves ovate, acuminate, serrate, tomentose and white beneath; cymes radiate.

HAB. Pennsylvania. July. *Shrub 6 ft. high; ext. fl. of the cymes large, wh. neut.*

297. SAXIFRAGA. Saxifrage. *Saxifrageæ.*

- †. *S. virginica*: pubescent; leaves oval, obtuse, crenate, narrowed at the base into a petiole; stem nearly leafless, corymbose-paniculate; flowers sub-

sessile ; petals oval, with branched nerves ; capsule half inferior.

HAB. Rocks and hills. April—May. 4. *Stem succul.*, 3—12 in. high ; *leav. thick* ; *fl. wh.*

2. *S. pennsylvanica* : pubescent, leaves oblong-lanceolate, acute at each extremity, obsoletely denticulate ; stem naked ; panicle oblong ; flowers fasciculate ; petals linear, longer than the calyx ; capsule superior.

HAB. Swamps. May—June. 4. *Leav. rad.*, 5—8 in. long ; *scape* 1½—2 ft. high ; *pet. yell. green.*

298. CHRYSOSPLENIUM. Golden Saxifrage. *Saxifrageæ*.

C. oppositifolium : leaves opposite, roundish-cordate.

HAB. Wet places. April—May. 4. *Pl. succul.*, *yell. gr.*, *dichot.* ; *fl. sess.*, 8-an.

299. TIARELLA. *Saxifrageæ*.

T. cordifolia : leaves cordate, acutely lobed, dentate ; teeth mucronate ; scape racemed.

HAB. Rocky hills. May. 4. *Leav. rad.*, *pubes.* ; *fl. in a simp. racem.*, *wh.*

300. MITELLA. False Sanicle. *Saxifrageæ*.

1. *M. diphylla* : leaves somewhat lobed, with the lobes acute and dentate ; stem erect, with two opposite leaves above the middle.

HAB. Banks of creeks. May. 4. *A foot high*, *simp. splend.* ; *racem. simp.* ; *fl. wh.*

2. *M. cordifolia* : leaves orbicular-reniform, doubly-crenate, with scattered hairs above ; scape erect or prostrate, naked, or with a single leaf.

HAB. Moist rocks. June. 4. *Stem. splend. with creeping stolons* ; *fl. few*, *wh.*

301. SAPONARIA. Soap-wort. *Caryophylleæ*.

S. officinalis : leaves ovate-lanceolate ; calyx cylindric, smooth.

HAB. Waste places, &c. June—Sept. 4. *Stem* 18 in. high, *scab.* ; *fl. large*, *rose-col.*

302. DIANTHUS. Pink. *Caryophylleæ*.

D. Armeria: flowers aggregate; fasciculate; scales of the calyx lanceolate, villous as long as the tube.
 HAB. Sandy soils. July. ☉. *A foot high, pubes. ; leav. lin. lan. ; fl. red, punct. §?*

302. SCLERANTHUS. Knapel. *Caryophylleæ*.

S. annuus: calyx of the fruit spreading, acute; stem spreading.
 HAB. Sandy fields. July. ☉. *Stem num. ; procumb ; fl. in axill. fasc., inconspic. §.*

TRIGYNIA.

304. CUCUBALUS. Campion. *Caryopholleeæ*.

1. *C. Behen*: smooth and glaucous, decumbent; leaves oblong-oval, acute, nerveless; calyx membranaceous, with reticulated veins.

HAB. Rocky hills. July. ♀. *Stem 18 in. high, panic. ; fl. large, nod. ; pet. wh.*

2. *C. niveus*: stem divaricate and dichotomous above; leaves oblong-lanceolate, minutely and pulverulently pubescent; the uppermost ovate; calyx obtuse, campanulate, inflated, subpilose; petals small, reflexed, bifid at the extremity; claws exerted beyond the calyx, nearly naked; flowers solitary, dichotomal, terminal.

HAB. On an island in the Susquehanna. *Fl. remote, solit. ; pet. wh.*

3. *C. stellatus*: erect, pubescent; leaves verticillate, in fours, oval-lanceolate, long-acuminate.

HAB. Woods. July—Aug. ♀. *Stem 2—3 ft. high ; pan. term. ; fl. wh. ; cal. not reticul.*

305. SILENE. Catch-fly. *Caryophylleæ*.

1. *S. pennsylvanica*: viscidly-pubescent; radical leaves cuneate; stem leaves lanceolate; panicles trichotomous; petals slightly emarginate, very obtuse, subcrenate.

HAB. Rocks and sandy woods. May—June. ♀.

Stems num., 8—12 in. high; *fl. in term. trichot. panic.*, purp.

2. *S. virginica*: erect or decumbent, viscidly pubescent; leaves oblong-lanceolate, scabrous on the margin; panicle dichotomous; petals bifid; stamens exserted.

HAB. Pennsylvania. June. ♀. *A foot high, mostly simp.*; *fl. few, crimson.*

3. *S. antirrhina*: leaves lanceolate, minutely ciliate; panicles trichotomous; calyx ovate; petals small, bifid, stamens included.

HAB. Hills and rocky banks. June. ☉. *Stem 1—2 ft. high, slender*; *fl. small*; *pet. wh.*

4. *S. nocturna*: flowers spiked, alternate, sessile, secund; petals bifid.

HAB. Pennsylvania. ☉. *Fl. scss., obov.*; *pet. wh., bifid, rather large.*

306. STELLARIA. Stitchwort. *Caryophylleæ.*

1. *S. pubera*: pubescent; stem decumbent; leaves ovate-oblong, sessile, acute, subciliate, somewhat undulate, pedicels dichotomal, recurved; petals longer than the calyx.

HAB. Shady rocks. May—June. ♀. *Stem 6—10 in. long*; *fl. large, wh.*

2. *S. media*: stem procumbent, with an alternate, pubescent, lateral line; leaves ovate, smooth; petals 2-parted; stamens 5—10.

HAB. Cultivated grounds, &c. ☉. *Stem weak*; *leav. petiol.*; *pedun. 1-fl.*

3. *S. longifolia*: very smooth; stem erect, quadrangular, weak; leaves linear-lanceolate; panicle terminal; peduncles divaricate, very long, bracteate; petals broad-obovate, 2-parted, longer than the acute 3-nerved calyx; styles 3—4.

HAB. Wet places. June. ♀. *Stem 1 ft. high, dichot.*, *leav. 1½—2 in. long*; *pan. loose.*

4. *P. lanceolata*: very smooth, procumbent or ascending; leaves lanceolate, acute at each end; petals about as long as the calyx; stigmas mostly 4, or wanting.

HAB. Mountain bogs. June. ♀. *Stem diff.*, 6—

3 in. long, *fl.* axill. and term., sometimes ap. ;
stam. 8—10.

307. ARENARIA. Sandwort. *Caryophyllæ*.

* *Leaves without stipules at the base.*

1. *A. peploides*: stem dichotomous; leaves ovate, acute, fleshy; calyx obtuse.

HAB. Sea-coast. July. 4. *Stem* decumb.; 8—12 in. long, thick; *fl.* subsol. axill.

1. *A. lateriflora*: stem filiform, simple or branched, pubescent; leaves ovate, subtriply nerved; peduncle lateral, solitary, elongated, bifid; one of the pedicels with 2 opposite bracts near the middle; corolla longer than the calyx.

HAB. Bog meadows. June. 4. *Stem* 5—8 in. high; *leav.* sess., pale gr., punct.

3. *A. serpyllifolia*: stem dichotomous, diffuse; leaves ovate, acute, subciliate; calyx hairy; exterior leaflets 5-ribbed.

HAB. Sandy fields. May—July. ☉. *Stem* 3—8 in. high; *leav.* minute, approx.

4. *A. squarrosa*: cespitose; inferior leaves squarrose-imbricate, canaliculate pungent; stem simple, few-leaved; flowers few, terminal, erect; petals much longer than the roundish calyx.

HAB. Pine barrens. May—Aug. 4. *Stem* num., 6 in. long; *leav.* crowd.; *fl.* large.

5. *A. glabra*: very smooth; stems numerous, erect, filiform; leaves subulate-linear, flat, spreading; pedicels 1-flowered, elongated, divaricate; leaflets of the calyx oval, obtuse, smooth, shorter than the petals.

HAB. Mountains. June. 4. *Stem* 4—6 in. high; *leav.* remote; *ped.* trichot.

6. *A. stricta*: smooth; stems numerous, filiform, simple; leaves subulate-linear, subfasciculate, spreading; leaflets of the calyx ovate, acute, conspicuously 3-nerved, half as long as the petals.

HAB. Mountains. May—June. 4. *Stems* 6—12 in. high; *leav.* rather rigid.

* *Leaves with stipules at the base.*

7. *A. rubra*: stems prostrate; leaves narrow-linear, acute, flat, somewhat fleshy, mucronate; stipules sheathing, ovate, cleft; capsule as long as the calyx; seeds compressed, angular, roundish.

HAB. Sandy fields. ☉. *Smooth, spreading; cal. viscid-pubes. ; fl. red; Stam 5—10.*

8. *marina*: leaves cylindrical, fleshy, unarmed.

HAB. Salt marshes. May—Nov. ☉ ♂. *Stem smooth; fl. dark rose-col.; seed compr.*

PENTAGYNIA.

308. SPERGULA. Spurrey. *Caryophylleæ.*

1. *S. arvensis*: leaves verticillate; panicle dichotomous; peduncles of the fruit reflexed.

HAB. Sandy fields. June—Aug. ☉. *Stem 6—10 in. high; leav. filif., 8—10 whorled. ♂.*

2. *S. saginoides*: glabrous; leaves opposite, subulate, awnless; peduncles solitary, very long, smooth.

HAB. Sandy fields. July. ☉. *Stem spread., 2—3 in. long; ped. axill. and term.*

309. CERASTIUM. Mouse-ear Chickweed. *Caryophylleæ.*

* *Petals not exceeding the calyx in length.*

1. *C. vulgatum*: hairy and viscid, cespitose, suberect, leaves ovate; flowers capitate, longer than their pedicels.

HAB. Fields and dry hills. May—Sept. ☉. *Plant pale green, viscid when young. ♂.*

2. *C. viscosum*: hairy and viscid, spreading; leaves oblong-lanceolate; flowers somewhat paniced, shorter than their pedicels.

HAB. Fields and road sides. May—Sept. ☉. *Darker green, spreading, rarely visc.*

3. *C. semidecandrum*: hairy and viscid, suberect; leaves oblong-ovate; flowers somewhat paniced.

shorter than their panicles ; stamens 5 ; petals slightly notched.

HAB. Dry hills. ☉. *Stems num., assurg. ; pet. often shorter than cal.*

4. *C. hirsutum* : very hairy, diffuse ; leaves obtuse, connate ; flowers clustered ; petals 2-cleft, a little longer than the acute calyx.

HAB. New-York, &c. ☉. *Leav. subovate, half in. long ; fl. in dense clust.*

* *Petals longer than the calyx.*

5. *C. nutans* : viscid and elongated ; stems erect, straight, deeply striate ; leaves elongated, distant, linear-oblong, acute ; petals oblong, bifid at the tip, longer than the calyx ; peduncles at length much longer than the flowers.

HAB. Rocky hills. June. ☉. *Pale green, 8—12 in. high, very visc. ; pan. loose, term.*

6. *C. oblongifolium* : cespitose, pubescent ; stem erect, terete, even ; leaves lanceolate-oblong, rather acute, shorter than the joints ; flowers terminal, shorter than the pedicels ; petals obovate, bifid at the tip ; twice the length of the calyx.

HAB. Mountains. June. ☿. *Stem 8 in. high, retrors. pubes. ; ped. bract., fl. large.*

7. *C. tenuifolium* : pubescent, cespitose ; leaves narrow-linear, longer than the internodes ; stems short, 3-flowered at the summit ; petals obovate, emarginate, 3 times as long as the calyx.

HAB. Mountains. June. ☿. *A span high ; leav. long, 1 line broad ; pedunc. elong.*

310. AGROSTEMMA. Corn-cockle. Caryophyllææ.

A. Githago : hairy ; calyx much longer than the corolla ; petals entire, without a crown.

HAB. Corn-fields. June—July. ☉. *Plant pale green, 2 ft. high ; fl. large, purp.*

311. OXALIS. Wood-sorrel. Oxalidææ.

* *Stemless.*

1. *O. Acetosella* : stemless ; scape 1-flowered, longer

than the leaves; leaves ternate, dilated-obcordate, pilose; styles as long as the interior stamens; root dentate.

HAB. Mountains. June. 4. *Leav. often purple beneath; fl. large, wh. veined.*

2. *O. violacea*: stemless; scape umbelliferous; flowers nodding; leaves ternate, obcordate, smooth; segments of the calyx callous at the tip; styles shorter than the exterior stamens; root squamose.

HAB. Rocky woods. April—June. 4. *Root thick, with ciliate scales; fl. violet.*

** *Caulescent.*

3. *O. corniculata*: pubescent; stem prostrate; leaves ternate, obcordate; umbels as long as the petioles; petals obovate; slightly emarginate; styles as long as the interior stamens.

HAB. Cultivated grounds, &c. May—Sept. ☉. *Stem 6—8 in. long; fl. sm., yell.*

4. *O. stricta*: hairy; stem erect, branched; leaves ternate, obcordate; umbels longer than the petioles; petals obovate, entire; styles as long as the interior stamens.

HAB. Sandy fields. May—Aug. 4.? *Stem 4—10 in. high, never creeping; fl. sm., yell.*

312. PENTHORUM. Virginia Stone-crop. *Sempervivæ.*

P. sedoides: stem branched, angular above; leaves lanceolate, subsessile, unequally serrate; spikes simple, secund, recurved, paniculate; seeds elliptical.

HAB. Wet places. July—Aug. 4. *Stem 12—18 in. high; leav. alt.; pet. mostly 0.*

313. SEDUM. Stone-crop. *Sempervivæ.*

1. *S. ternatum*: creeping; leaves flat, rounded-spathulate, ternate; cymes mostly 3-spiked; terminal flowers decandrous; the rest octandrous.

HAB. On rocks. May. 4. *Stem 4—6 in. long; leav. entire; fl. wh.; anth. dark.*

2. *telephioides*: leaves broad, flat, ovate, acute at each end; corymbs many-flowered.

HAB. Rocky hills. 11. A foot high, leafy, purplish; fl. pale purp.

DECAGYNIA.

314. PHYTOLACCA. Poke. *Atriplices*.

P. decandra: leaves ovate, acute at each end; flowers with 10 stamens and 10 styles.

HAB. Waste places. June—Oct. 14. Smooth. 4—8 ft. high, purp.; fl. racem. wh.; ber. purp.

ICOSANDRIA.

MONOGYNIA.

315. CACTUS. *Cal.* superior, many-cleft; segments imbricate. *Pet.* numerous, inserted in several series; the interior ones larger. *Stig.* many-cleft. *Berry* 1-celled, many-seeded.

316. PRUNUS. *Cal.* inferior, campanulate, 5-cleft, deciduous. *Pet.* 5. *Drupe* even. *Nut* with a prominent suture.

317. LYTHRUM. *Cal.* tubular-campanulate, 6—12-toothed. *Pet.* 6, equal, inserted upon the calyx. *Caps.* 2—4-celled, many-seeded.

318. CUPHEA. *Cal.* ventricose, tubular, 6—12-toothed, unequal. *Pet.* 6, unequal, inserted into the calyx. *Caps.* with the calyx bursting longitudinally, 1-celled.

DI-PENTAGYNIA.

319. AGRIMONIA. *Cal.* inferior, 5-cleft, with a lobed calicle at its base. *Pet.* 5. *Stam.* 12. *Achen.* 2, in the bottom of the calyx.

320. CRATÆGUS. *Cal.* superior, 5-cleft. *Pet.* 5. *Styles* 1—5. *Fruit* pulpy, closed, with from 2—5 1-seeded nuts.

321. SORBUS. *Cal.* 5-cleft. *Pet.* 5. *Styles* 2 or 3. *Berry* inferior, farinaceous, with 3 cartilaginous seeds.

322. *SESUVIUM*. *Cal.* 5-parted, coloured. *Pet.* 0. *Caps.* superior, ovate, 3-celled, opening transversely all round, many-seeded.
323. *ARONIA*. *Cal.* 5-toothed. *Pet.* 5. *Berry* inferior, 5—10-celled; cells 1—2-seeded. *Seeds* cartilaginous.
324. *PYRUS*. *Cal.* 5-cleft. *Pet.* 5. *Apple* inferior, large and fleshy, 5-celled, many-seeded. *Seeds* cartilaginous.
225. *SPIRÆA*. *Cal.* inferior, 5-cleft, expanding. *Pet.* 5, equal, roundish. *Stam.* numerous, exserted. *Caps.* numerous, (3—12.) 1-celled, 2-valved. each 1—3 seeded.
226. *GILLENIA*. *Cal.* tubular-campanulate; border 5-toothed. *Cor.* partly unequal. *Pet.* 5, lanceolate, attenuate at the base. *Stam.* few, included. *Styles* 5. *Caps.* 5, connate at the base, opening on the inner side, each 2-seeded.

POLYGYNIA.

327. *ROSA*. *Cal.* urceolate, fleshy, contracted at the orifice; border 5-cleft. *Pet.* 5. *Seeds* numerous, hispid, attached to the interior side of the calyx.
328. *RUBUS*. *Cal.* 5-cleft, inferior. *Pet.* 5. *Fruit* composed of many 1-seeded juicy acines, on a dry receptacle.
329. *DALIBARDA*. *Cal.* inferior, 8-cleft, spreading. *Styles* 5—8, long and deciduous. *Seeds* dry.
330. *DRYAS*. *Cal.* 8—10-cleft, segments equal. *Seeds* 5—8, with long plumose awns.
331. *GEUM*. *Cal.* 10-cleft, inferior; the alternate segments smaller. *Pet.* 5. *Seeds* awned, with the awn naked or bearded, mostly geniculate.
332. *POTENTILLA*. *Cal.* flat, 10-cleft, (rarely 8 or 12-cleft;) segments alternately smaller. *Pet.* 5, (rarely 4.) *Seeds* or *acines* subovate; mostly rugose, immersed in a common receptacle, which is juiceless or spongy, more or less hemispherical.
333. *FRAGRARIA*. *Cal.* 10-cleft. *Pet.* 5. *Acines*

naked, fixed on a large, pulpy, deciduous receptacle.

334. CALYCANTHUS. *Cal.* urceolate, many-cleft above; segments squarrose, coloured, petaloid. *Cor.* 0. *Styles* numerous. *Seeds* numerous, naked, smooth, included in a ventricose, succulent calyx.

ICOSANDRIA.

MONOGYNIA.

315. CACTUS. Indian Fig, &c. *Cacti.*

C. Opuntia: articulately proliferous; articulations compressed, ovate; spines setaceous; fruit succulent, smooth.

HAB. Rocks and Sandy fields. June—July. 4.
Procumb., *leaf.*, *fleshy*; *fl.* *yell.*

316. PRUNUS. Plum and Cherry. *Rosaceæ.*

* *Flowers racemose.*

1. *P. virginiana*: racemes erect, elongated; leaves deciduous, oval-oblong, acuminate, shining above, serrate, smooth on both sides; petioles with 2—4 glands.

HAB. Woods. May. *A large tree*; *racem. simp.*; *fl. wh.*; *drupe black.*

2. *P. serotina*: racemes loose, at length pendulous; leaves deciduous, ovate, with a short acumination, doubly and very acutely serrate; midrib bearded on each side towards the base; petiole with 2 glands.

HAB. Woods. May. *A small tree*; *leav. thin*; *drupe red.*

3. *P. canadensis*: flowers in racemes; leaves deciduous, without glands, broad-lanceolate, rugose, pubescent on both sides.

HAB. Pennsylvania. *Branch smooth*; *leav. without glands*; *base atten.* +.

* *Peduncles subumbellate or solitary.*

4. *P. pennsylvanica*: flowers subcorymbed; pedicels

elongated; leaves ovate-oblong, acuminate, erosely denticulate, smooth; petioles with 2 glands; branches punctate; fruit subovate.

HAB. Mountains. June. *A small tree; leav. memb.; corymb. 6—8-fl.; drupe red.*

5. *P. nigra*: umbels sessile, solitary, few-flowered; leaves deciduous, ovate, acuminate, unequally and acutely serrate; smooth on both sides; petioles with 2 glands.

HAB. Mountains. June. *Shrub 6—8 ft. high; branch. red; ped., smooth, short.*

6. *P. pygmæa*: umbels sessile, few-flowered; leaves ovate, acute, smooth on each side, acutely serrate, with 2 glands at the base.

HAB. New-England, &c. *Shrub 3—4 ft. high; fruit small, black, indifferent.*

7. *P. pubescens*: leaves sessile, aggregated, few-flowered; peduncles and calyx pubescent; leaves short-oval, serrulate; drupe spherical.

HAB. Sandy shores and hill sides. May. *Shrub 2—3 ft. high; fruit br. purp., glauc.*

8. *P. pumila*: umbels aggregated, sessile, few-flowered; calyx acute; branches virgate, terete; leaves narrow-lanceolate, serrate above, pale beneath.

HAB. Banks of rivers. May. *Shrub 2—3 ft. high; leav. long; fruit red, acid.*

9. *P. depressa*: umbels sessile, aggregated, few-flowered; calyx obtuse; branches angular, depressed-prostrate; leaves cuneate-lanceolate, remotely serrate, smooth, glaucous beneath.

HAB. Sandy shores. *A shrub, low, spreading; fr. small, black, agreeable.*

10. *P. maritima*: peduncles subsolitary; leaves ovate-oblong, acuminate, doubly serrate.

HAB. Sea-coast. *Fruit large, dark purp.*

12. *P. mollis*: younger branches, leaves and peduncles pubescent; umbels sessile, 2—3-flowered; leaves ovate, long-acuminate, doubly dentate-serrate; stipules setaceous, denticulate; calyx nearly smooth; segments linear-lanceolate, serrate.

HAB. Woods. *A small tree; leav. 2—3 in. long; fr. oval, large, nearly black.*

317. LYTHRUM. Loose-strife. *Salicariæ*.

* *Calyx subcampanulate, 10-toothed; capsule 3—4-celled.* DECODON.

1. *L. verticillatum*: pubescent; leaves opposite and ternate, lanceolate, petiolate; flowers axillary, verticillate, decandrous; petals undulate; fruit subglobose.

HAB. Swamps. Aug. 4. Stem 2 ft. high, 6-ang.; fl. in axill. corymbs, purp.

** *Calyx tubular, capsule 2-celled.*

2. *L. Salicaria. β. pubescens*: pubescent; leaves opposite and ternate, sessile, lanceolate, cordate at the base; flowers with 12 stamens, terminal, verticillate-spiked; capsule oblong.

HAB. Wet meadows. 4. About 2 ft. high; fl. purp., very showy. +.

3. *L. hyssopifolium*: leaves alternate and opposite, linear-lanceolate and subelliptic; flowers axillary, hexandrous.

HAB. New-York. 4. Stem mostly simp., quadrang., submargined; fl. pale purp.

318. CUPHEA. *Salicariæ*.

C. viscosissima: viscous; leaves opposite, petiolate, ovate-oblong; flowers lateral, solitary, on short peduncles; stamens 12.

HAB. Fields and mountains. Sept. ☉. Stem 12—18 in. high, pubes.; fl. purp.

DI-PENTAGYNIA.

319. AGRIMONIA. Agrimony. *Rosaceæ*.

1. *A. Eupatoria*: hairy; cauline leaves interruptedly pinnate; leaflets ovate, with the terminal one petiolate, acutely dentate, smoothish; spike virgate; petals twice as long as the calyx; fruit turbinate, hispid, smooth at the base.

HAB. Woods and hedges. June—Aug. 4. Stem 2 ft. high, simp.; fl. small, yellow.

β. *hirsuta*: whole plant very hairy.

2. *A. parviflora*: hairy; leaves interruptedly pinnate, with the terminal one sessile; leaflets numerous, mostly linear-lanceolate, incisely serrate; spike virgate; flowers on very short pedicels; petals one and a half the length of the calyx; fruit roundish, divaricately hispid.

HAB. Woods. Aug. 4. Fl. small, yellow.

320. CRATÆGUS. Hawthorn. Rosaceæ.

1. *C. coccinea*: thorny; leaves on long petioles, ovate, subcordate, acutely lobed and serrate, petioles and the pubescent calyx glandular; flowers pentagynous.

HAB. Woods. May. A large shrub; spines long; fl. corymb., wh.; fr. red, edible.

2. *C. cordata*: thorny; leaves cordate-ovate, pinnatifid, lobed and angled. smooth; petioles and calyx without glands; flowers pentagynous.

HAB. Hedge rows and river banks. A large shrub; corymbs. comp.; fr. red, glob.

3. *C. pyrifolia*: thorny or unarmed; leaves ovate-elliptic, incisely serrate, somewhat plicate and hairy; calyx villous; segments linear-lanceolate, serrate, flowers trigynous.

HAB. Rocky woods, &c. June. 7. Leav. large, sublob.; pedunc. and cal. toment.

4. *C. elliptica*: thorny; leaves elliptical, unequally serrate, smooth; petioles and calyx glandular; fruit globose, 5-seeded.

HAB. Copses and dry swamps.

5. *C. glandulosum*: thorny; leaves obovate-cuneiform, smooth and shining; petioles, stipules and calyx glandular; fruit oval, 5-seeded.

HAB. Mountains. May. 7. Fruit middle-sized, scarlet.

6. *C. parvifolia*: thorny; leaves obovate, subsessile, deeply and obtusely serrate, subtomentose; leaflets of the calyx laciniate; flowers subsolitary, pentagynous.

HAB. Sandy woods. June. Shrub 4 ft. high; branch. toment. ; fr. large, yellow.

7. *C. punctata* : thorny or unarmed ; leaves obovate-cuneate, subplicate, smooth, incisely serrate, decurrent at the base into a petiole ; calyx villous ; segments subulate, very entire ; berries subglobose, with the summit depressed.

HAB. Woods and swamps. May. A small tree ; veins of the leav. hairy ; fr. yellow or red.

8. *C. Crus galli* : thorny ; leaves obovate-cuneiform, subsessile, shining, coriaceous ; corymbs compound ; segments of the calyx lanceolate, serrate ; flowers digynous.

HAB. Woods, &c. June. A small tree, with long spines ; style often solit. ; fr. red.

321. SORBUS. Service-tree. *Rosaceæ*.

1. *S. americana* : leaves pinnate ; leaves somewhat equally serrate, and with the common petiole very smooth.

HAB Mountains. May. A large shrub ; leaf. 7 pairs ; corymbs term. ; fr. fulv.

2. *S. microcarpa* : leaves pinnate ; leaflets acuminate, acutely and incisely serrate, and with the common petiole smooth ; serratures setaceously mucronate.

HAB. High mountains. A large shrub ; young branch. glossy ; fr. sm. scarlet.

322. SESUVIUM. *Ficoideæ*.

S. sessile : flowers sessile ; leaves linear-oblong, flat.

HAB. Sea-coast. Succul. ; leav. oppos. ; fl. axill., solit., rosaceous.

323. ARONIA. *Rosaceæ*.

1. *A. arbutifolia* : unarmed ; leaves ovate-oblong, acute, crenulately serrulate, tomentose beneath ; flowers in corymbs ; calyx tomentose.

HAB. Low thickets. May. Shrub 2—4 ft. high ; fruit scarlet, sweetish and astring.

β. *melanocarpa* : leaves beneath, and the calyx smooth ; fruit black.

HAB. Mountains ; rarely in bogs. *Leav. narrower ; fruit black.*

2. *A. Botryapium* : unarmed ; leaves cordate, oval, conspicuously acuminate, glabrous when mature ; flowers in racemes ; petals linear-lanceolate.

HAB. Low woods. May. *A small tree ; young leav. silky ; fr. purp., eatable.*

3. *A. ovalis* : unarmed ; leaves roundish-elliptical, acute, smooth ; flowers in racemes ; petals obovate ; germens and segments of the calyx pubescent.

HAB. Swamps. *A small shrub ; ber. black and eatable.*

324. PYRUS. Apple and Pear. *Rosaceæ.*

1. *P. coronaria* : leaves broadly-oval, round at the base, somewhat angular, serrate, smooth ; peduncles racemose.

HAB. Woods. May. *A small tree ; fl. large, frag., fr. yell., depress., acid.*

2. *P. angustifolia* : leaves lanceolate-oblong, acute at the base, slightly crenate-dentate, shining ; peduncles corymbose.

HAB. Pennsylvania. May. *A small tree ; leav. and fr. smaller than No. 1.*

325. SPIRÆA. Meadow-sweet. *Rosaceæ.*

* *Frutescent.*

1. *S. salicifolia* : leaves lanceolate, acutely serrate, smooth ; racemes terminal, compound, paniced ; flowers pentagynous.

HAB. Wet meadows. July. *Stem 2—4 ft. high ; leav. obtuse or acute ; fl. wh.*

2. *S. tomentosa* : leaves ovate-lanceolate, unequally serrate, tomentose beneath ; racemes terminal, compound, crowded ; flowers pentagynous.

HAB. Low grounds. July—Aug. *Suffrut. 2—3 ft. high ; racem. elong. ; fl. purp.*

3. *S. hypericifolia* : leaves obovate, very entire, or dentate at the summit, smooth ; umbels sessile.

HAB. Dry swamps. May. *Shrub 3 ft. high ; branch. slend ; fl. num., wh.*

4. *S. corymbosa*: leaves oblong-obovate, incisely-dentate; pubescent beneath; corymb terminal, pedunculate, compound, fastigiate, somewhat leafy; flowers pentagynous.

HAB. Mountains. *Suffrut.* 18 in. high; corymb. many-fl., wh. or rose-col.

5. *S. crenata*: leaves obovate, acute, toothed at the summit, 3-nerved; corymbs crowded, pedunculate.

HAB. New-York. +.

6. *S. opulifolia*: leaves ovate, lobed, doubly toothed and crenate, smooth; corymbs terminal, with the flowers crowded and trigynous; capsules inflated.

HAB. Rocky banks. June—July. *Shrub* 3—5 ft. high; corymb simp.; fl. wh.

* *Herbaceous.*

7. *S. aruncus*. *β. americana*: leaves twice or thrice pinnate, shining; spikes slender, in an oblong panicle; flowers trigynous, perfect.

HAB. Mountains. June. 4. *Stem* 4—6 ft. high; fl. wh.

8. *S. lobata*: leaves pinnate, smooth; terminal leaflet much larger and 7-lobed; lateral leaflets 3-lobed; corymbs proliferous.

HAB. Pennsylvania. June. 4. *Leaflet* subpalm., lobed; fl. rose-col., 3—5-gyn.

326. GILLENIA. *Rosaceæ.*

1. *G. trifoliata*: leaves ternate, lanceolate, serrate; stipules linear, entire; flowers in terminal loose panicles.

HAB. Rocky hills. June. 4. *Stem* 2 ft. high, red; fl. large, wh.; pet. elong.

2. *G. stipulacea*: radical leaves pinnatifid; stem leaves ternate; leaflets incisely-serrate; stipules foliaceous, ovate, incisely dentate; flowers in loose terminal panicles.

HAB. Mountains. 4. *Stem* 2—3 ft. high, red, stip. very large; fl. wh.

POLYGYNIA.

327. ROSA. Rose. *Rosaceæ*.

1. *R. parviflora*: fruit depressed-globose, and with the peduncles hispid; petioles pubescent, somewhat prickly; stem smooth; stipular prickles straight; leaflets elliptical-lanceolate, simply serrate, smooth when mature; flowers mostly by pairs.

HAB. Woods and copses. June—July. *Shrub 3 ft. high; fl. large red.*

2. *R. nitida*: fruit subglobose; calyx, peduncles, and branches hispid; petioles somewhat hairy, unarmed; leaflets (7) oblong-lanceolate, on both sides smooth and shining.

HAB. Pennsylvania. +.

3. *R. lucida*: fruit depressed-globose, and with the peduncles somewhat hispid; petioles smooth, a little prickly; stem smooth; stipular prickles straight; leaflets ovate-lanceolate, rather obtuse, coarsely serrate, smooth and shining; flowers generally by pairs; segments of the calyx entire.

HAB. Mountain bogs. July. *Shrub 3 ft. high; fl. large, red.*

4. *R. gemella*: fruit depressed-globose, and with the peduncles glabrous; flowers mostly by pairs, leaflets oblong, acute, opaque; petioles and under surface of the veins pubescent; stipular prickles uncinatè, by pairs.

HAB. Dry hills. June. *A low shrub; fl. large, red.*

5. *R. carolina*: fruit globose, and, with the peduncles somewhat hispid; petioles hairy, somewhat prickly; stem smooth; prickles uncinatè; leaflets (5—7) oblong-lanceolate, acute, sharply serrate, glaucous beneath; flowers in corymbs.

HAB. Swamps and wet thickets. June—July. *Shrub 3—8 ft. high; prickles strong; corymbs 5—7-fl.; pet. obovate, large.*

6. *R. rubiginosa*: fruit ovate; peduncles and petioles glandular-hispid; stem smooth; branches and

prickles recurved ; leaflets oblong, opaque, pubescent above, ferruginous and glandular beneath.

HAB. Hedges, &c. *Shrub slend., climb. ; leaf. 5—7, sweet-scent. ; fl. pale red.*

328. RUBUS. Bramble. *Rosaceæ.*

* *Frutescent.*

1. *R. Idæus* : leaves pinnate ; leaflets 3—5, rhombic-ovate, acuminate, white and very downy beneath ; petioles canaliculate ; stem nearly erect, prickly.

HAB. Borders of lakes.

2. *R. villosus* : pubescent, hispid and prickly ; stem angular ; leaflets in fives, digitate, elliptical, acuminate, serrate, pubescent on both sides ; calyx short-acuminate ; racemes loose, naked ; pedicels solitary.

HAB. Fields and hedges. June. *Shrub 4—6 ft. high ; fl. wh. ; fr. large, blk.*

3. *R. frondosus* : pubescence simple ; racemes leafy, few-flowered ; the upper flowers opening first ; petals orbicular-ovate, approximate.

HAB. Road-sides. *Fl. larger.*

3. *R. strigosus* : unarmed ; strongly hispid ; leaflets in threes, or pinnate in fives, oval, obtuse at the base, marked with lines, and whitish-downy beneath ; the terminal one often subcordate ; peduncles and calyx hispid.

HAB. Rocky hills. May. *Shrub upright ; raceme few-fl. ; fr. red, agreeable.*

4. *R. euncifolius* : branches, petioles, and peduncles pubescent ; stem erect ; slightly angular ; leaflets ternate, cuneate-obovate, entire at the base, sub-plicate, tomentose beneath ; racemes loose ; pedicels solitary, 1-flowered.

HAB. Sandy fields and woods. June. *Shrub 2 ft. high ; fr. black, ovate, agreeable.*

5. *R. canadensis* : smoothish ; leaves digitate, in fives and threes ; leaflets rhombic-lanceolate, naked on both sides, acutely serrate ; stem unarmed, with lanceolate bracts ; pedicels elongated, 1—3-flowered ; calyx 5—7-cleft.

HAB. Sandy woods and swamps. June. *Stem sar-*

ment., procumb. or reclin.; leaf. thin; pet. short; fr. dark red.

6. *R. occidentalis*: branches and petioles glaucous and aculeate; leaves ternate; leaflets ovate-acuminate, somewhat lobed, coarsely serrate, hoary tomentose beneath; petioles terete; racemes terminal.

HAB. Rocky places. May—Aug. *Stems long, slender; racem. long; fr. black, round.*

7. *R. hispidus*: sarmentose-procumbent; stems, petioles and peduncles very hispid with rigid bristles; leaves ternate; leaflets incisely serrate, naked; the intermediate one pedicellate.

HAB. Pennsylvania. June.

8. *R. trivialis*: sarmentose-procumbent; petioles and peduncles aculeate-hispid, with the prickles recurved; stipules subulate; leaves ternate and quinately oval, acute, unequally serrate; pedicels solitary, elongated.

HAB. Stony fields. May—June. *Stems long; leav. subsemperv. ; fr. large, black.*

9. *R. odoratus*: unarmed, erect, viscidly pubescent; leaves simple, acute, 3—5-lobed; corymbs terminal, divaricate; calyx appendiculate; petals nearly round.

HAB. Rocky places. June. *Shrub 3—4 ft. high; fl. large, purp.; fr. yellow, large.*

** *Somewhat herbaceous.*

10. *R. saxatilis* β . *canadensis*: herbaceous, pubescent; stems creeping; leaves ternate; leaflets rhombic, acute, incisely dentate, naked; the terminal one petiolate; flowers somewhat in threes; pedicels elongated.

HAB. Mountains. *Fruit small, black.*

11. *R. obovalis*: stem becoming a little woody, hispid with stiff hairs; leaves ternate; leaflets round-obovate, serrate, naked; stipules setaceous; racemes subcorymbed, few-flowered; bracts ovate; pedicels elongated.

HAB. Mountain swamps. May—July. *Fr. with few acini, black, sweet.*

12. *R. Chamæmorus*: herbaceous, small; stem unarm-

ed, 1-flowered, erect; leaves simple, subreniform, with rounded lobes, petals oblong.

HAB. High mountains. *Fl.* wh.; *fr.* yellow, or amber-col.

329. DALIBARDA. *Rosaceæ*.

1. *D. repens*: villous; stolons creeping; leaves simple, cordate, crenate; peduncles 1-flowered.

HAB. Woods and mountains. June. 4. *Scape filif.*; *fl.* wh.; *pet.* ovate.

2. *D. fragarioides*: leaves ternate; leaflets ovate, incisely serrate, cuneate at the base; peduncles many-flowered.

HAB. Woods. May. *Petiol.* 3—4 in. long.; *fl.* small, yellow.

330. DRYAS. Mountain avens. *Rosaceæ*

D. integrifolia: leaves elliptical-ovate, entire.

HAB. High mountains. 4. *Suffrut.*; *cespit.*; *sempvir.*; *fl.* wh., *solit.*

331. GEUM. Avens. *Rosaceæ*.

1. *G. strictum*: hairy; leaves all interruptedly pinnate; the terminal leaflet larger; leaflets ovate, dentate; stipules incised; calyx with 5 alternate segments, linear and short; flowers erect; petals roundish, a little longer than the segments; awns naked, uncinat.

HAB. Swamps. Aug. 4. *Stem simp.*, 2 ft. high; *fl.* large, yellow, *clust.*

2. *G. agrimonoides*: very hairy; leaves all pinnate; leaflets nearly equal, unequally and incisely dentate; stipules ovate, nearly entire; flowers erect; segments of the calyx subequal; petals oval, as long as the calyx.

HAB. Rocky banks. 4. *Fl.* wh. Cfr. *POTENTILLA confertiflora*.

3. *G. virginianum*: pubescent; radical and lower cauline leaves ternate; the upper lanceolate; stipules ovate, nearly entire; flowers erect; petals shorter than the calyx; awns uncinat, naked, hairy, and twisted at the summit.

HAB. Woods and thickets. June—July. 4. *Stem* 2 ft. high; *fl. pedunc.*, yell.-wh.

4. *G. album*: pubescent; radical leaves pinnate; stem leaves ternate, the upper one simple, 3-cleft; lower stipules incised; flowers erect; petals as long as the calyx; awns uncinatc, naked, hairy at the summit.

HAB. Banks of rivers, &c. June—July. *Stem* 2 ft. high; *fl. wh.*, on short *ped.*

5. *G. rivale*: pubescent; stem simple; radical leaves interruptedly pinnate; cauline ones 3-cleft; flowers nodding; petals as long as the calyx; awns plumose, nearly naked at the summit, minutely uncinatc.

HAB. Bogs. May—June. *Stem* 1½ ft. high; *term. leaf.* large; *fl. purp.*

- G. Peckii*: somewhat hairy; stem few-flowered; radical leaves reniform; incisely toothed, and somewhat lobed; petioles elongated, with minute leaflets; petals roundish, longer than the calyx.

HAB. High mountains. July—Aug. 4. *A span* high; *fl. middle sized*, yellow.

332. POTENTILLA. *Rosaceæ*.

* *Leaves ternate*.

1. *P. tridentata*: assurgent; stipules subulate; leaves ternate, oblong cuneiform, 3-toothed at the summit, smoothish above, pubescent beneath; corymb loose, few-flowered; petals oblong-obovate, longer than the calyx.

HAB. Mountains. June—July. *Cespit.*, 3—6 in. high; *leav. coriac.*; *fl. wh.*

2. *P. hirsuta*: stem erect, simple; leaves ternate; leaflets roundish, hairy, unequally dentate-serrate; teeth obtuse; petals shorter than the calyx.

HAB. New-York. July—Aug. ☉. *Stem purp.*, hairy; *fl. dichot.*; pale yellow; (*wh.*)

3. *P. norvegica*: stem erect, dichotomous above; leaves ternate, petiolate; leaflets oblong, acutely serrate, with spreading hairs; pedicels axillary; petals obovate, shorter than the calyx.

HAB. Old fields. June—Aug. ☉. *Hairy, 8 in. high; stip. large; fl. yellow.*

**** Leaves digitate.**

4. *P. canadensis*: whole plant silky villous; stem procumbent and ascending, somewhat branched; leaves quinate-obovate, incisely dentate; peduncles solitary, elongated; segments of the calyx linear-lanceolate; petals orbicular, nearly as long as the calyx.

HAB. Fields and woods. April—May. ♀. *Stem 2—10 in. high; fl. yellow; recept. hairy.*

5. *P. simplex*: stem sarmentose; simple; leaves quinate; leaflets oblong-oval, coarsely serrate, hairy beneath; stipules incised; peduncles axillary, solitary, elongated; petals roundish obcordate, a little longer than the calyx.

HAB. Fields and woods. May—Aug. ♀. *Hairy; ped. 1-fl; fl. yellow.*

6. *P. argentea*: stem ascending; leaves quinate; leaflets cuneiform, incised, revolute on the margin, white and tomentose beneath; petals retuse, a little longer than the calyx.

HAB. Rocks and fields. June—Sept. ♀. *Often spreading; leav. gr. above; fl. yellow.*

***** Leaves pinnate.**

7. *P. fruticosa*: stem fruticose; leaves pinnate; leaflets oblong-lanceolate, very entire; petals longer than the calyx.

HAB. Bog meadows. June. *A shrub, 2 ft. high; much branch.; fl. yellow.*

8. *P. Anserina*: stem creeping; leaves interruptedly pinnate; leaflets numerous, incisely and very acutely serrate, silky; pedicels axillary, solitary, as long as the leaves; stipules many-cleft.

HAB. Wet meadows. June. ♀. *Stems long; leaflets 7—10 pairs, wh. beneath; fl. yellow.*

9. *P. supina*: stem decumbent, dichotomous; leaves pinnate; leaflets oblong, incisely serrate; peduncles axillary, solitary, 1-flowered.

HAB. Overflowed banks. June—Aug. ☉. *Fl. small, yellow.*

10. *P. palustris*: root creeping; stem ascending; leaves pinnate; leaflets lanceolate, acutely serrate; petals lanceolate, acuminate, much shorter than the calyx.

HAB. Swamps. June. 4. Stem 18 in. high, pubes.; leaf. 5—7; fl. large, dark purp.

11. *P. pennsylvanica*: erect, very soft, and somewhat whitish villous; leaves pinnate; leaflets oblong, obtuse, subpinnatifid, woolly; panicle straight, many-flowered; segments of the calyx semioval.

HAB. Pennsylvania, &c. July—Aug. 4. Stems num., 18 in. high; leav. interrupt., pin.

12. *P. confertiflora*: viscous and very hairy; stem erect, nearly simple; leaves somewhat interruptedly pinnate; leaflets roundish-ovate, doubly and incisely dentate, oblique; stipules ovate, acute, entire; flowers clustered, subsessile; leaflets of the calyx unequal, oblong, acute; petals obovate, longer than the calyx.

HAB. Rocky hills. June. 4. Stem brownish-pubes., 2 ft. high; fl. yell.-wh.

333. FRAGARIA. Strawberry. Rosaceæ.

F. virginiana: leaflets broad-oval, smoothish above; the lateral ones distinctly petiolate; hairs of the petiole spreading; of the peduncles appressed; fructiferous; calyx spreading.

HAB. Fields and woods. May—June. 4. Stem sarment.; fl. wh.; fr. red.

334. CALYCANTHUS. Carolina Allspice. Rosaceæ.

C. lævigatus: segments of the calyx lanceolate; leaves oblong or oval, gradually acuminate, somewhat rugose, smooth and green on both sides; branches straight, erect.

HAB. Mountains. Shrub 4—6 ft. high; leav. oppos. fl. large, purp., odor.

POLYANDRIA.

MONOGYNIA.

335. TILIA. Cal. inferior, 5-parted. deciduous. Pet.

5. *Cap.* globose, 5-celled, 5-valved, opening at the base ; (by abortion 1-celled, 1—2-seeded.)
336. **HELIANTHEMUM.** *Cal.* 5-leaved ; exterior leaflets smaller. *Pet.* 5. *Caps.* superior, 1-celled, 3-valved ; valves septiferous in the middle. *Seeds* angular.
337. **HUDSONIA.** *Cal.* tubular, 5-parted, unequal. *Pet.* 5. *Stam.* 15—30. *Caps.* 1-celled, 3-valved, 1—3-seeded.
338. **PORTULACCA.** *Cal.* inferior, bifid. *Pet.* 5. *Caps.* 1-celled, opening circularly. *Recept.* unconnected, 5-lobed.
339. **TALINUM.** *Cal.* 2—5-leaved, inferior. *Pet.* 5. *Caps.* 1-celled, 3-valved, many-seeded. *Recept.* globose. *Seeds* axillate.
340. **CHELIDONIUM.** *Cal.* 2-leaved, deciduous. *Pet.* 4. *Stig.* small, sessile, bifid. *Caps.* elongated, silique-form, 2-valved, 1-celled, linear. *Seeds* numerous, crested.
341. **MECONOPSIS.** *Cal.* 2-leaved, deciduous. *Pet.* 4. *Style* distinct ; *stig.* 4—6-rayed. *Caps.* oblong, mostly echinate, 1-celled, 4—6-valved ; *recept.* slender.
342. **ARGEMONE.** *Cal.* 3-leaved, deciduous. *Pet.* 4—6. *Stig.* sessile, capitate, 4—7-rayed. *Caps.* ovate, angular, 1-celled, opening at the summit by valves ; *recept.* linear. *Seeds* spherical, scrobicular.
343. **SANGUINARIA.** *Cal.* 2-leaved, deciduous. *Pet.* about 8. *Stig.* didymous. *Caps.* oblong, 2-valved, 1-celled, acute at each end ; valves deciduous ; *recept.* 2, persistent.
344. **PODOPHYLLUM.** *Cal.* 3-leaved. *Pet.* about 9. *Stig.* large, crenate, sessile. *Caps.* ? 1-celled, many-seeded, at length berry-like ; *recept.* unilateral, large and pulpy.
345. **ACTÆA.** *Cal.* 4-leaved, deciduous. *Pet.* 4, often wanting. *Stig.* sessile, capitate. *Berry* superior, 1-celled, many-seeded. *Seeds* hemispherical.
346. **SARRACENIA.** *Cal.* double, persistent ; exterior smaller, 3-leaved ; interior 5-leaved. *Pet.* 5, deciduous. *Stig.* very large, persistent, pel-

tate, covering the stamens. *Caps.* 5-celled, 5-valved, many-seeded.

347. NUPHAR. *Cal.* 5—6-leaved. *Pet.* numerous, minute, inserted with the stamens upon the receptacle. *Stig.* disk-form, radiate. *Pericarp* berry-like, many-celled, many-seeded.

348. NYMPHÆA. *Cal.* 4—5-leaved. *Pet.* numerous, inserted upon the germens beneath the stamens. *Stig.* disk-form, radiate. *Pericarp* berry-like, many-celled, many-seeded.

DI-PENTAGYNIA.

349. DELPHINIUM. *Cal.* petaloid, deciduous, irregular.

350. ACONITUM. *Cal.* petaloid, irregular.

351. AQUILEGIA. *Cal.* 5-leaved, petaloid, deciduous. *Petals* 5, terminating below in a spurred nectary. *Caps.* 5, erect, acuminate with the styles, many-seeded.

352. CIMICIFUGA. *Cal.* 4—5-leaved. *Pet.* 4—8, (sometimes wanting.) *Caps.* 4—5, oblong, many-seeded.

353. ASCYRUM. *Cal.* 4-leaved; the 2 interior leaflets larger and cordate. *Pet.* 4. *Stam.* subpolyadelphous. *Styles* 1—3. *Caps.* 1-celled.

354. HYPERICUM. *Cal.* 5-parted; segments equal. *Pet.* 5. *Stam.* polyadelphous. *Styles* 1—5. *Caps.* membranaceous, 1—5-celled.

POLYGYNIA.

355. MAGNOLIA. *Cal.* 3-leaved. *Pet.* 6—9. *Capsules* 2-valved, 1-seeded, imbricated in a cone. *Seeds* berried, pendulous on a very long *funiculus*.

356. LIRIODENDRON. *Cal.* 3-leaved. *Pet.* 6. *Samaræ* subanceolate, 1—2-seeded, imbricated in a cone.

357. ASIMINA. *Cal.* 3-parted. *Pet.* 6, spreading, ovate-oblong; the interior smaller. *Anth.* subsessile. *Berries* several, ovate, sessile, many-seeded.

358. CLEMATIS. *Invol.* 0, or calyciform. *Cal.* 4—8.

leaved, coloured. *Pet.* 0, or very short. *Seeds* with a long, mostly plumose cauda.

359. **ANEMONE.** *Invol.* 3-leaved, distant from the flower; leaflets divided. *Cal.* petaloid, 5—15-leaved. *Pet.* 0. *Seeds* numerous.
360. **THALICTRUM.** *Invol.* 0. *Cal.* 4—5-leaved, petaloid. *Pet.* 0. *Seeds* without awns.
361. **HYDRASTIS.** *Cal.* 3-leaved, petaloid; leaflets ovate. *Pet.* 0. *Berry* composed of many 1-seeded grains.
362. **CALTHA.** *Cal.* coloured, 5-leaved; leaflets orbicular, petaloid. *Caps.* 5—10, compressed, spreading, 1-celled, many-seeded.
363. **COPTIS.** *Cal.* 5—6-leaved, coloured and petaloid, deciduous. *Pet.* small, cucullate. *Capsules* 5—8, stipulate, diverging, ovate-oblong, 4—6-seeded, rostrate.
364. **TROLLIUS.** *Cal.* 5—15-leaved, petaloid, deciduous. *Pet.* 5—20, small, tubular at the base. *Capsules* sessile, subcylindrical, many-seeded.
365. **HEPATICA.** *Invol.* 3-leaved, near the flower, resembling a calyx; leaflets entire. *Cal.* 6—9-leaved, petaloid, disposed in several series. *Seeds* without awns.
366. **RANUNCULUS.** *Cal.* 5-leaved. *Pet.* 5, with a nectariferous pore at the base, on the inside. *Capsules* numerous, ovate, shortly mucronate, 1-seeded, not opening.
367. **BRASENIA.** *Cal.* 3-leaved. *Pet.* 3—4. *Pericarp* oblong, 2-seeded. *Seeds* pendulous.
368. **NELUMBIUM.** *Cal.* petaloid, 4—6-leaved. *Pet.* numerous. *Pericarps* numerous, deeply immersed in the upper surface of a turbinate receptacle; (*torus.*) *Seed* large, round, solitary.

POLYANDRIA.

POLYGYNIA.

335. **TILIA.** Lime, or Linden. *Tiliaceæ.*

1. *T. glabra*: leaves round-cordate, abruptly acuminate, acutely serrate, subcoriaceous, smooth; pe-

als truncate at the apex, crenate ; style as long as the petals, equal ; fruit ovate, subcordate.

HAB. Woods. June. *A large tree ; fl. cymose ; yell.-wh., ped. winged.*

2. *T. pubescens* : leaves truncate at the base, oblique, denticulate-serrate, pubescent beneath ; petals emarginate ; styles longer than the petals ; fruit globose, smooth.

HAB. Banks of rivers. June. *A large tree.*

3. *T. laxiflora* : leaves cordate, gradually acuminate, sparingly toothed, membranaceous, smooth ; panicle loose ; petals emarginate ; styles longer than the petals ; fruit globose.

HAB. Near the sea-coast. June.

336. HELIANTHEMUM. *Cistineæ.*

1. *H. canadense* : without stipules ; erect, hairy ; leaves erect, linear-lanceolate, flat, paler beneath ; raceme terminal, few-flowered ; segments of the calyx broad-ovate ; capsule shorter than the calyx.

HAB. Dry fields and woods. June. 4. *A foot high ; fl. yellow ; cal. hairy.*

2. *H. ramuliflorum* : without stipules, erect, pulverulent-tomentose ; leaves oblong, acute ; margin a little revolute, whitish beneath ; racemes very short ; segments of the calyx roundish, pulverulent ; capsule globose, as long as the calyx.

HAB. Sandy fields. 4. July. *Fl. yellow ; style very short ; cal. hairy.*

3. *H. corymbosum* : suffrutescent, without stipules, erect, branched, pubescent ; leaves alternate, lanceolate, hoary-tomentose beneath ; flowers crowded, in fastigiate corymbs ; segments of the calyx ovate, acute ; capsule scarcely as long as the calyx.

HAB. Sandy fields. June—Aug. *Fl. very small, often apert.*

337. HUDSONIA. *Cistineæ.*

1. *H. ericoides* : pubescent ; suberect ; branches elongated, leaves filiform, subulate, somewhat imbricate ; peduncles numerous, elongated ; calyx cy-

lindrical, obtuse ; capsule pubescent, 1-seeded ; valves oblong.

HAB. Pine barrens. May—June. $\frac{1}{2}$. Stem 4—6 in. high ; leav. persist. ; fl. sm. yellow.

H. tomentosa : cespitose, hoary-pubescent ; leaves minute, closely imbricate, ovate, acute ; flowers aggregated, sessile ; calyx subcylindric ; segments obtuse ; capsule smooth.

HAB. Sea-shore. June. $\frac{1}{2}$. Stem 6 in. high, intricate ; fl. num., yellow.

338. PORTULACCA. Purslane. *Portulacæ*.

P. oleracea : leaves cuneiform, smooth ; flowers sessile.

HAB. Cultivated grounds, &c. May—Aug. ☉. Spreading, succul. ; fl. yellow. §.

339. TALINUM. *Portulacæ*.

T. teretifolium : leaves terete, subulate, fleshy ; scape cymose ; flowers pedunculate, polyandrous ; calyx 2-leaved.

HAB. Rocks. July. $\frac{1}{4}$. Subcespit. ; leav. crowd. ; rad. ; fl. purp.

340. CHELIDONIUM. Celandine. *Papaveraceæ*.

C. majus : leaves pinnate, lobed ; segments rounded ; umbels axillary, pedunculate ; petals elliptical, entire.

HAB. Along fences, &c. May—Oct. $\frac{1}{4}$. Plant yielding an orange juice, branch. ; leav. glauc. ; fl. yellow. §.

341. MECONOPSIS. *Papaveraceæ*.

M. diphylla : leaves 2, sessile, hairy ; lobes rounded and obtuse, subundulate : capsule 4-valved, echinate.

HAB. Shady woods, &c. May. $\frac{1}{4}$. A foot high : glauc. and subpilose ; fl. yellow.

342. ARGEMONE. Prickly poppy. *Papaveraceæ*.

A. mexicana.

HAB. Banks of rivers. July. ☉. *Leav. pinnatif., spiny; fl. axill. and term., large, yellow or white.*

343. SANGUINARIA. Blood-root. *Papaveraceæ.*

S. canadensis.

HAB. Fertile woods. April—May. ♀. *Root tub. with a bitter juice; leav. rad., renif.; fl. large, wh., solit.*

344. PODOPHYLLUM. May-apple. *Podophyllaceæ.*

P. peltatum: stem erect, 2-leaved; leaves peltate.

HAB. Woods. May. ♀. *Stem 1' ft. high; leav. lobed; fl. sol. wh.; fr. ovate.*

345. ACTÆA. Bane-berry. *Ranunculaceæ.*

A. americana: leaves twice and thrice ternate; raceme ovate; petals shorter than the stamens; berries ovate-oblong.

α. *alba*: petals truncate; pedicels of the fruit thicker than the peduncle; berries white.

β. *rubra*: petals acute; pedicels of the fruit slender; berries red.

HAB. Rocky woods. May. ♀. *Stem 2 ft. high: leaf. ovate-lan., incis.; fl. wh.*

346. SARRACENIA. Side-saddle flower.

S. purpurea: leaves much shorter than the scape. inflated; ventral wing arched; appendix erect. broad-cordate, undulate, not mucronate.

HAB. Sphagnous swamps. June—July. *Leav. all rad., large and tubular, open at the top; scape 1 ft. high; fl. large, sol., purp.*

β. ———: flowers yellow.

347. NUPHAR. Yellow Pond-lily. *Nymphæaceæ.*

1. *N. advena*: calyx 6-leaved; petals numerous; fruit sulcate; leaves cordate, with divaricate lobes: petioles semicylindrical.

HAB. In water. June—July. 4. *Leav. upright or floating; fl. large, depress., yellow.*

2. *N. Kalmiana*: calyx 5-leaved; stigmas incised, 8—12-rayed; leaves cordate, with approximate lobes; petioles roundish.

HAB. In water. July—Aug. 4. *Leav. and fl. small; cal. equal.*

348. NYMPHÆA. Water-lily. *Nymphæaceæ.*

N. odorata: leaves orbicular-cordate, entire; nerves and veins prominent; calyx 4-leaved, equal to the petals; stigma 16—20-rayed; rays inflexed.

HAB. In water. June—July. 4. *Leav. float.; fl. large, wh., odorous.*

DI-PENTAGYNIA.

349. DELPHINIUM. Larkspur. *Ranunculaceæ.*

1. *D. exaltatum*: petioles not dilated at the base; leaves flat, 3-cleft below the middle; lobes cuneiform, 3-cleft at the apex, acuminate; lateral ones often 2-lobed; raceme straight; spur longer than the calyx; capsules 3.

HAB. Rocky woods. July 4. *Stem 2—4 ft. high; fl. blue; spur straight.*

2. *D. azureum*: petioles slightly dilated at the base; leaves 3—5-parted, many-cleft; lobes linear; raceme straight; petals densely bearded; flowers on short pedicels.

HAB. Woods. May. 4. *Stem 2 ft. high; fl. large, light blue.*

350. ACONITUM. Wolf's-bane. *Ranunculaceæ.*

A. uncinatum: panicle rather loose, with diverging branches; galea conical; spur inclined, somewhat spiral; styles 3—5; leaves 3-lobed; lobes equal.

HAB. Mountain swamps. Sept. 4. *Fl. large, blue.*

351. AQUILEGIA. Columbine. *Ranunculaceæ.*

A. canadensis: spurs straight; styles and stamens exserted; calyx rather acute, longer than the pe-

tals ; division of the leaves 3-parted, rather obtuse, incisely toothed.

HAB. Rocks. April—May. 4. *Fl. pend., scarl. ext., yell. int. ; fr. erect.*

352. CIMICIFUGA. Black Snake-root. *Ranunculaceæ.*

C. racemosa : leaves ternately decompose ; leaflets ovate-oblong, incised and dentate ; racemes paniculate, elongated ; flowers with one style ; capsule ovate.

HAB. Rocky woods. June—July. 4. *Stem 4—3 ft. high ; fl. wh. ; pet. 0.*

353. ASCYRUM. St. Peter's-wort. *Hypericineæ.*

1. *A. Crux-Andreæ* : stems numerous, assurgent, suffruticose ; leaves lanceolate-oblong, obtuse ; interior leaflets of the calyx suborbicular ; pedicels bibracteate ; flowers sessile, with 2 styles.

HAB. Pine barrens. July—Aug. *Stems 6—8 in. high fl. num., yellow ; pet. narrow.*

2. *A. stans* : stem fruticose, winged, straight ; leaves ovate-elliptical, obtuse, glaucous ; interior leaflets of the calyx cordate, orbicular ; stamens united at the base, styles 2.

HAB. Pine barrens. Aug. *Stem 1 ft. high ; branch. straight ; fl. yellow.*

354. HYPERICUM. St. John's-wort. *Hypericineæ.*

* *Styles 5 ; Stam. numerous, indefinite ; flowers yellow.*

1. *H. ascyroides* : smooth ; stem quadrangular, winged at the base ; leaves sessile, oblong-lanceolate, acute ; calyx ovate-lanceolate ; styles as long as the stamens.

HAB. Low grounds. July. *Stem 2 ft. high, simp. or branch. ; fl. and leav. large.*

2. *H. Kalmianum* : frutescent, much branched ; branches quadrangular ; leaves linear-lanceolate ; flowers 3—7, in a terminal corymb ; calyx lanceolate, rather obtuse.

HAB. Wet rocks. August. *Stem 2—4 ft. high ; leav. num., fascic., often revol.*

** *Styles 3 ; stamens numerous, indefinite ; flowers yellow.*

† *Frutescent.*

3. *H. prolificum*: branches ancipital ; leaves lanceolate-linear, rather obtuse, corymbs axillary and terminal, few-flowered ; calyx lanceolate.

HAB. Pennsylvania. July.

4. *H. galioides*: branches quadrangular ; leaves linear, sessile, revolute on the margin, punctate ; panicles terminal, dichotomous, and divaricate ; calyx linear ; styles often united.

HAB. Wet sandy places. July—Sept. Stem 2 ft. high.

††. *Herbaceous.*

5. *H. perforatum*: stem ancipital ; leaves obtuse, oblong, with pellucid punctures ; flowers paniculate ; calyx lanceolate ; styles diverging.

HAB. Fields. June—Aug. 4. A foot high ; branch. ; anth. black-punctate. ♂.

6. *H. punctatum*: stem terete, black-punctate ; leaves oblong-oval, obtuse, amplexicaul ; flowers corymb, punctate ; calyx lanceolate.

HAB. Meadows and woods. June—Aug. 4. Stem 2 ft. high ; branch. ; fl. small.

7. *H. quinquenervium*: erect, much branched, smooth ; stem quadrangular ; leaves ovate, subcordate, obtuse, sessile, about 5-nerved ; corymb dichotomous ; calyx linear-lanceolate, longer than the petals.

HAB. Wet places. June—Sept. ☉. Stem 6—10 in. high ; fl. very small ; yellow.

8. *H. canadense*: stem erect and straight, 4-winged ; leaves linear, attenuate at the base, rather obtuse ; panicle elongated, dichotomous ; calyx lanceolate ; styles very short ; capsule conical.

HAB. Sandy places. June—July. ☉. Stem 6—10 in. high ; fl. minute ; caps. red.

9. *H. angulosum*: erect ; stem quadrangular ; leaves distant, oblong-lanceolate, subamplexicaul, acute ; panicle dichotomous, with the flowers alternate ; calyx lanceolate, acute, subcarinate.

HAB. Cedar swamps. Aug. 4. Stem 1—1½ ft. high; fl. copper-colour.

10. *H. Sarothra*: erect, much branched above; branches setaceous; leaves minute, subulate, appressed; flowers terminal, subsolitary; stamens few; capsule 1-celled.

HAB. Sandy fields. June—Aug. ☉. Stem 3—6 in. high; leav. inconspic.; fl. minute.

*** *Calyx of 5 equal leaves; styles 3; stamens numerous, somewhat definite; (9—15—18.) distinctly polyadelphous.*

11. *H. virginicum*: stem terete, leaves oblong, amplexicaul, punctate, very obtuse, flowers pedunculate, in terminal and axillary peduncles; calyx lanceolate; stamens mostly 9.

HAB. Swamps. July—Sept. 4. Stem 1 ft. high; fl. middle-sized, reddish.

POLYGYNIA.

355. MAGNOLIA. *Magnoliaceæ.*

1. *M. acuminata*: leaves deciduous, oval, acuminate, pubescent beneath; flowers 6—9-petalled; petals obovate, rather obtuse.

HAB. Mountain valleys. June—July. Tree middle-sized; fl. yell.-gr.

2. *M. tripetala*: leaves deciduous, oblong-lanceolate, acute, spreading; pubescent when young, smooth when mature; petals 9—12, rather acute, the 3 exterior ones reflexed.

HAB. Mountain woods. June. A small tree; leav. and fl. large.

3. *M. glauca*: leaves perennial, elliptical, obtuse; glaucous beneath; flowers 9—12-petalled; petals obovate, concave.

HAB. Swamps. May—June. A small tree; leav. 2—3 in. long; fl. odorous.

356. LIRIODENDRON. Tulip-tree. *Magnoliaceæ.*

L. Tulipifera.

HAB. Woods. July. *A large tree ; leav. 4-lobed, truncate ; fl. large, sol., yell.-gr.*

357. ASIMINA. *Anonaceæ.*

A. triloba: leaves oblong-cuneate, acuminate, smoothish ; flowers on short peduncles ; exterior petals suborbicular, four times as long as the petals.

HAB. Banks of rivers. May. *A large shrub ; fl. dark br. ; fr. fleshy, large, edible.*

358. CLEMATIS. Virgin's-bower. *Ranunculaceæ.*

1. *C. virginiana*: climbing ; leaves ternate ; leaflets ovate, subcordate, incisely toothed and lobed ; acute ; flowers paniculate, diœcious.

HAB. Shady thickets. July—Aug. *h. Stem long ; fl. white, in large dichot. pan.*

2. *C. Viorna*: climbing ; leaves pinnately compound ; segments ovate, entire, or 3-lobed, acute ; flower solitary, campanulate ; leaflets of the calyx thick, acuminate, reflexed at the apex.

HAB. In copses, &c. June. *h. Fl. large, violet, nodding ; leav. smooth.*

3. *C. ochroleuca*: herbaceous, erect, simple, pubescent ; leaves simple, ovate, very entire ; the younger ones with the calyx silky ; flower terminal, pedunculate, solitary, nodding.

HAB. Dry copses. June. *u. A foot high ; fl. yell.-wh. ; fr. erect.*

† *Calyx 4-leaved ; petals numerous, minute.* ATRAGENE.

1. *C. verticillaris*: leaves verticillate in fours, ternate ; leaflets cordate, nearly entire ; peduncles 1-flowered ; petals acute.

HAB. Mountains. May—June. *h. Climbing ; fl. very large, purp.*

359. ANEMONE. Wind-flower. *Ranunculaceæ.*

1. *A. nemorosa* : *β. quinquefolia*: leaves ternate ; segments 5-parted, incisely dentate, lanceolate, acute ; involucre similar, petiolate ; stem 1-flowered ; calyx 6-leaved ; capsules awnless.

HAB. Woods. April—May. 4. Root black, tub.; stem 6 in. high; fl. wh. or purplish.

2. *A. lancifolia*: leaves ternate; leaflets lanceolate, crenate-dentate; calyx 5-leaved, leaflets ovate, acute; stem 1-flowered.

HAB. High mountains. May—July. 4. Fl. wh.; fr. ovate, with a short uncinat style.

3. *A. pennsylvanica*: leaves 3-parted; lobes oblong, incisely toothed at the apex; involucre similar, sessile, bearing several pedicels, one of which is naked and 1-flowered, the others involucrellate; fruit pubescent.

HAB. Meadows. June—July. 4. A foot high; pedunc. elong.; fl. yell.-wh., large.

4. *A. virginiana*: leaves ternate; segments 3-cleft, acuminate, incisely toothed; involucre similar, petiolate; leaflets of the calyx acuminate; fruit oblong.

HAB. Woods. July. 4. Stem 2 ft. high; fl. gr.-yell.; cal. hairy; caps. woolly.

360. THALICTRUM. Meadow-rue. *Ranunculaceæ*.

* *Stamens longer than the calyx.*

1. *T. dioicum*: very smooth; leaves decompose; leaflets roundish, with obtuse lobes, glaucous beneath; filaments filiform; flowers diœcious.

HAB. Rocky woods. April. 4. Stem 2 ft. high; fl. panic., rose-col.; fr. oval, striate.

2. *T. pubescens*: leaves decompose; leaflets ovate, 3-lobed, minutely and densely pubescent beneath; margin revolute; filaments filiform; flowers polygamous.

HAB. Wet meadows. June—July. 4. Stem 4—5 ft. high; fl. in large pan.; cal. decid.

3. *T. Cornuti*: leaves decompose; leaflets ovate, obtusely 3-lobed, glaucous and a little pubescent on the veins beneath; flowers diœcious; filaments clavate; fruit sessile, striate.

HAB. Wet meadows. June—July. Stem 2—5 ft. high; fl. gr.-yell. +.

4. *T. rugosum*: leaves decompose; leaflets ovate-lanceolate, rugose, veined, obtusely lobed; flowers diœcious, filaments filiform.

HAB. Swamps. June—Aug. Stem 3—5 ft. high; fl. in large pan., wh.

5. *T. purpurascens*: leaves compound, shorter than the stem; leaflets roundish, 3-cleft and incised; panicles nearly leafless; flowers cernuous; stamens coloured.

HAB. Dry hills. May—June. 4. Plant small; stem and filam. purp. +.

** Stamens shorter than the petaloid calyx.

6. *T. anemonoides*: root tuberous; flowers umbelled; floral leaves petiolate, resembling an involucre; flowers perfect; calyx 8—10-leaved.

HAB. Woods. April—May. 4. Stem 6—8 in. high; leaf. smooth; fl. large, wh.

361. HYDRASTIS. Yellow-root. Ranunculaceæ.

H. canadensis.

HAB. Rocky woods. May. 4. Stem 6 in. high, 1—2-leav.; leav. incis., pubes.; fl. solit., red-wh., fr. fleshy, red.

362. CALTHA. Marsh-marigold. Ranunculaceæ.

1. *C. palustris*: stem erect; leaves cordate, suborbicular, obtusely crenate.

HAB. Swamps. April—June. 4. A foot high, dichot.; leav. petiol.; fl. large, yellow.

2. *C. integerrima*: stem erect, corymbed; leaves orbicular-cordate, very entire, with the sinus closed; floral ones sessile, reniform, obscurely crenate at the base; leaflets of the calyx obovate.

HAB. Wet meadows, &c. May—July. 4. Fl. corymb., smaller than in No. 1.

3. *C. parnassifolia*: stem erect, 1-flowered, 1-leaved; radical leaves, cordate-ovate, very obtuse; many-nerved; leaflets of the calyx elliptical.

HAB. Cedar swamps. June—July. 4. Fl. middle-sized, deep yellow.

4. *C. flabellifolia*: stem procumbent, many-flowered; leaves dilated-reniform; lobes widely spreading, acutely dentate; leaflets of the calyx obovate; capsules uncinat.

HAB. Mountain springs. July—Aug. 24. A foot high; fl. middle-sized, yellow.

363. COPTIS. *Ranunculaceæ*.

C. trifolia: leaves ternate; leaflets obovate, obtuse, dentate, obscurely 3-lobed; scape 1-flowered.

HAB. Swamps. May—June. 24. Leav. on long pet.; scape 6 in. high; fl. wh.

364. TROLLIUS. *Ranunculaceæ*.

T. laxus: calyx spreading; leaflets 5—10, oblong; petals (nectaries) shorter than the stamens.

HAB. Woods. June. 24. Stem 1 foot high; leaves palm.; fl. large, yellow.

365. HEPATICA. Liverwort. *Ranunculaceæ*.

H. triloba: leaves cordate, 3-lobed; lobes entire; petioles and scape hairy.

α. obtusa: lobes of the leaves rounded, obtuse.

β. acuta: lobes of the leaves acute.

HAB. *α*. In woods: *β*. On mountains. April—May. 24. Scape 1-fl.; fl. blue.

366. RANUNCULUS. Crowfoot. *Ranunculaceæ*.

*. *Pericarps transversely rugose-striate; petals white.*

1. *R. aquatilis*: *β. capillaceus*: stem filiform, floating; leaves all immersed, and filiformly dissected; petals obovate, longer than the calyx.

HAB. In brooks, &c. July—Aug. 24. Stem long; leav. petiol.; fl. small; cal. pubes.

**. *Pericarps smooth, short, ovate, collected into a roundish head; flowers yellow.*

†. *Leaves undivided.*

2. *R. Lingua*: leaves lanceolate, subserrate, sessile, semiamplexicaul; stem erect, smooth.

HAB. Borders of lakes, &c. July. 24. Stem 2—3 ft. high, succul. ; fl. large, yellow.

3. *R. Flammula* : leaves smooth, linear-lanceolate, or subovate, nearly entire, the lower ones petiolate ; stem more or less decumbent, rooting ; peduncles opposite to the leaves.

HAB. Swamps. June—July. 24. Stem 12—18 in. high, succul. ; fl. smaller than No. 2.

4. *R. pusillus* : leaves all on long petioles ; the inferior ones ovate, subdentate ; superior linear-lanceolate ; stems numerous, erect ; petals mostly 3, as long as the calyx.

HAB. Wet places. July. 24. A span high ; rad. leav. cord. ; fl. minute.

5. *R. Cymbalaria* : radical leaves petiolate, smooth, somewhat fleshy, cordate-reniform, coarsely crenate ; scapes naked, elongated, 1—4-flowered ; petals linear, as long as the calyx.

HAB. Salt marshes. July—Aug. 24. Scapes 2—6 in. high, often stolonif. ; fl. sm. ; fr. oblong.

6. *R. reptans* : β . *filiformis* : leaves linear-subulate ; stems filiform, creeping, geniculate ; joints 1-flowered.

HAB. River banks. July—Aug. 24. Stems 6—10 in. long ; fl. small ; fr. very smooth.

††. *Leaves divided.*

7. *R. abortivus* : leaves smooth ; radical ones petiolate, cordate-orbicular, crenate ; stem leaves ternate and 3-cleft, with linear segments ; calyx smooth, a little longer than the petals.

HAB. Rocky woods. April—June. 24. A foot high ; fl. small ; fr. ovate, compress.

3. *R. sceleratus* : leaves smooth ; radical ones petiolate, 3-parted ; divisions 3-lobed, obtuse, subincised ; superior 3-parted, with oblong-linear entire lobes ; calyx pubescent ; fruit linear-oblong.

HAB. Ditches, &c. May—Aug. 24. A foot high, much branch. ; stem succul. ; fl. small.

9. *R. multifidus*: floating; leaves all cleft into numerous capillary segments, with axillary leaflets; petals 5—8, obovate, twice as long as the calyx; nectary concave.

HAB. Stagnant waters. May—June. 4. Stem 3—4 ft. long; fl. large, shining.

10. *R. acris*: leaves mostly pubescent, 3-parted; lobes incisely toothed, acute; upper ones linear; stem erect, many-flowered; peduncles not sulcate; calyx spreading, subvillous.

HAB. Wet meadows. June. 4. Stem 2 ft. high, pubes.; fl. large; cal. reflex. §.

11. *R. hispidus*: erect, branched; stem and petioles with stiff spreading hairs; leaves ternate; leaflets acutely lobed; pubescence of the pedicels appressed; calyx appressed.

HAB. Wet places. May. 4. Stem 1½ ft. high, very hairy; fl. large.

12. *R. recurvatus*: erect; stem and petioles with spreading hairs; leaves 3-parted, hairy; segments broad-oval, subincised; the lateral ones 2-lobed; calyx reflexed; petals lanceolate; pericarps uncinat.

HAB. In woods. May—July. 4. A foot high; leav. subpentang.; fl. very small.

13. *R. pennsylvanicus*: erect; stem and petioles very hairy; the hairs rigid and spreading; leaves ternate, villous; segments subpetiolate, acutely 3-lobed, incisely serrate; calyx reflexed; pericarps with a straight style.

HAB. Wet meadows. June—Aug. 4. ? Stem 16 in. high; branch.; fl. large; fr. in obl. heads.

14. *R. fascicularis*: erect, branched; leaves pubescent, ternate; the middle segment deeply 3-cleft; lateral ones remotely 3-lobed; calyx spreading, villous, shorter than the petals.

HAB. Rocky woods. April—May. 4. Root fascic.; fl. large; nect. flat, cuneif.

15. *R. bulbosus*: hairy; radical leaves ternate; leaflets petiolate, 3-cleft, incisely dentate, stem erect, bulbous at the base; calyx reflexed; peduncles sulcate.

HAB. Pastures, &c. May—July. 4. Stem 12—18 in. high; fl. large; plant acrid.

16. *R. marilandicus*: stem erect, somewhat branched, soft-hairy; leaves smoothish, ternate; leaflets 3-lobed; lobes oblong, acute, incisely-dentate; calyx smooth, spreading, shorter than the petals.

HAB. Woods. May—July. 4. *Pericarps compressed, acum., with a straight style.*

17. *R. repens*: leaves ternate; leaflets cuneate, 3-lobed, incisely-dentate; middle one petiolate; main stems prostrate; flowering ones erect; peduncles sulcate; calyx appressed.

HAB. Wet meadows. June—Sept. 4. Stem 1—2 ft. high; fl. middle-sized.

367. BRASENIA. Water-target. *Podophyllaceæ*.

B. Hydropeltis.

HAB. Ponds. July—Aug. 4. Floating; leaves oval, centrally peltate, very entire; purp. and gelat. beneath; fl. sol., purp., on long pedunc.

368. NELUMBIUM. Water-chinquelin. *Nymphæacæ*.

N. luteum: corolla many-petalled; anthers produced into a linear appendage at the extremity; leaves peltate, orbicular, very entire.

HAB. In lakes. July. 4. Petioles and pedunc. scab.; fl. very large, yellow.

DIDYNAMIA.

GYMNOSPERMIA.

* Calyx mostly 5-cleft, subregular.

369. TEUCRIUM. Upper lip of the Cor. wanting, but a fissure in its place, through which the stamens are exerted.

370. MENTHA. Cor. subregular, 4-lobed; the broader segment emarginate. Stam. erect, distant.

371. ISANTHUS. Cal. subcampanulate. Cor. 5-parted; tube straight and narrow; segments of

the border equal. *Stam.* subequal. *Stig.* linear, recurved.

372. **HYSSOPUS.** Lower lip of the *Cor.* 3-parted ; middle segment crenate. *Stam.* straight, distant.
373. **NEPETA.** *Cal.* arid, striate. Tube of the *Cor.* rather long, intermediate segment of the lower lip crenate, margin of the orifice reflexed. *Stam.* approximate.
374. **LAMIUM.** Upper lip of the *Cor.* vaulted, entire ; lower lip 2-lobed, toothed on each side.
375. **GALEOPSIS.** Upper lip of the *Cor.* vaulted, notched ; lower lip 3-lobed, 2-toothed above.
376. **STACHYS.** Upper lip of the *Cor.* vaulted, lower lip 3-lobed ; the lateral lobes reflexed. *Stam.* reflexed to the sides after flowering.
377. **LEONURUS.** *Cal.* 5-angled. Upper lip of the *Cor.* entire, flat, erect ; lower lip 3-parted ; middle segment entire. *Anth.* sprinkled with shining dots.
378. **GLECHOMA.** Upper lip of the *Cor.* bifid. *Anth.* approaching each other in pairs, and forming a cross.
379. **MARRUBIUM.** *Cal.* 10-ribbed. Upper lip of the *Cor.* linear, straight, cleft.
379. **PYCNANTHEMUM.** Heads surrounded by an involucre of many bracts. *Cal.* tubular, striate. Upper lip of the *Cor.* nearly entire ; lower lip 3-cleft. *Stam.* nearly equal, distant ; cells of the *Anth.* parallel.

** *Calyx bilabiate.*

381. **CLINOPODIUM.** Whorls surrounded by a se-taceous involucre.—Upper lip of the *Cor.* flat, emarginate.
382. **ORIGANUM.** Flowers collected into a dense, 4-sided spike. Upper lip of the *Cor.* straight, flat, emarginate.
383. **DRACOCEPHALUM.** Orifice of the *Cor.* inflated ; upper lip concave. *Stam.* unconnected.
384. **PRUNELLA.** Upper lip of the *Cal.* dilated. *Filam.* forked, one of the points antheriferous.
385. **SCUTELLARIA.** Upper lip of the *Cal.* covering the fruit like an operculum.

386. **TRICHOSTEMA.** *Cal.* resupinate. Upper lip of the *Cor.* falcate. *Stam.* very long, and incurved.

ANGIOSPERMIA.

*. *Calyx* 5-cleft.

387. **PHRYMA.** *Cal.* cylindric; upper lip longer, 3-cleft; lower lip bidentate. Upper lip of the *Cor.* emarginate; lower much larger. *Seed* solitary.
388. **VERBENA.** *Cal.* with one of the teeth truncate. *Cor.* infundibuliform; *limb* 5-cleft, unequal. *Stam.* 2—4. *Seeds* 2—4, enclosed in a thin evanescent *pericarp.*
389. **ZAPANIA.** Flowers capitate. *Cal.* 5-toothed. *Cor.* 5-lobed. *Stam.* 4, fertile. *Stig.* peltately capitate, oblique. *Seeds* 2, at first enclosed in an evanescent *pericarp.*
390. **HERPESTIS.** *Cal.* unequal, bibracteate at the base. *Cor.* tubular, subbilabiate. *Stam.* included, all fertile. *Caps.* 2-valved, 2-celled; dissepiment parallel with the valves.
391. **LIMOSELLA.** *Cal.* 5-cleft. *Cor.* 4—5-lobed, equal. *Stam.* approximating by pairs. *Caps.* 2-valved, partly 2-celled, many-seeded.
392. **SCROPHULARIA.** *Cor.* subglobose, resupinate, shortly bilabiate, with an internal intermediate scale. *Caps.* 2-celled.
393. **BIGNONIA.** *Cal.* 5-toothed, cyathiform, partly coriaceous. *Cor.* campanulate, 5-lobed, ventricose on the under side. *Silique* 2-celled. *Seeds* membranaceously winged.
394. **RUELLIA.** *Cal.* often bibracteate. *Cor.* subcampanulate; border 5-lobed. *Stam.* approximating by pairs. *Caps.* attenuated at each extremity, bursting with elastic teeth. *Seeds* few.
395. **BUCHNERA.** *Cal.* 5-toothed. Tube of the *Cor.* slender; border 5-cleft, nearly equal; lobes cordate. *Caps.* 2-celled.
396. **ANTIRRHINUM.** *Cal.* 5-parted. *Cor.* personate or ringent, with a prominent or spurred

nectary at the base. *Caps.* 2-celled, bursting at the summit, with reflected teeth.

397. *COLLINSIA*. *Cal.* 5-cleft. *Cor.* bilabiate, orifice closed ; upper lip bifid ; the lower trifid ; intermediate segment carinately saccate, and closed over the declinate style and stamens. *Caps.* globose, partly 1-celled, and imperfectly 4-valved. *Seeds* 2—3, umbilicate.

398. *GERARDIA*. *Cal.* half 5-cleft, or 5-toothed. *Cor.* subcampanulate, unequally 5-lobed ; segments mostly rounded. *Caps.* 2-celled, opening at the summit.

399. *PEDICULARIS*. *Cal.* ventricose, half 5-cleft. Upper lip of the *Cor.* arched, laterally compressed, emarginate. *Caps.* 2-celled, oblique, mucronate. *Seeds* angular.

400. *MIMULUS*. *Cal.* prismatic, 5-toothed. *Cor.* ringent ; upper lip reflexed at the sides ; palate of the lower lip prominent. *Stig.* thick, bifid. *Caps.* 2-celled, many-seeded. *Seeds* minute.

401. *CHELONE*. *Cal.* 5-parted, with 3 bracts. *Cor.* ringent, ventricose. *Sterile filam.* shorter than the rest ; *anthers* woolly. *Caps.* 2-celled, 2-valved. *Seeds* membranaceously margined.

402. *PENTSTEMON*. *Cal.* 5-leaved. *Cor.* bilabiate, ventricose. The *fifth* steril filament longer than the rest, and bearded on the upper side. *Caps.* ovate, 2-celled, 2-valved. *Seeds* numerous, angular.

403. *MARTYNIA*. *Cal.* 5-cleft. *Cor.* ringent. *Caps.* ligneous, corticate, 4-celled, 2-valved, each of the valves terminating in a long hooked *beak*.

** *Calyx* 4-cleft.

404. *SCHWALBEA*. *Cal.* ventricose-tubular ; upper segment shortest ; the lower large and emarginate. *Cor.* ringent ; upper lip entire, arched. *Caps.* ovate-oblong, 2-celled, 2-valved ; *dissepiment* produced by the inflected margin of the valves, and parallel with the longitudinal receptacle. *Seeds* numerous, imbricated, linear, winged.

405. **EUCHROMA.** *Cal.* ventricose, 2—4-cleft. *Cor.* bilabiate; upper lip very long and linear, embracing the style and stamens. *Anth.* linear, with unequal lobes, all cohering in the form of an oblong disk. *Caps.* ovate, compressed, 2-celled. *Seeds* numerous, surrounded with a membranaceous inflated vesicle.
406. **BARTSIA.** *Cal.* 4-cleft. *Cor.* ringent; upper lip concave, entire. *Anth.* equally lobed, uncombined. *Caps.* 2-celled. *Seeds* angular.
407. **MELAMPYRUM.** *Cal.* 4-cleft. Upper lip of the *Cor.* compressed; margin folded back; lower lip grooved, trifid, subequal. *Caps.* 2-celled, oblique, opening on one side; cells 2-seeded. *Seeds* cartilaginous, cylindric-oblong, smooth.
408. **OROBANCHE.** *Cal.* 4—5-cleft; segments often unequal. *Cor.* ringent. *Caps.* ovate, acute, 1-celled. *Seeds* numerous. A *gland* beneath the base of the germen.
409. **EPIPHEGUS.** Polygamous.—*Cal.* abbreviated, 5-toothed. *Cor.* of the infertile flower ringent, compressed, 4-cleft; lower lip flat: corolla of the fertile flower minute, 4-toothed, deciduous. *Caps.* truncate, oblique, 1-celled, imperfectly 2-valved, opening only on one side.

DIDYNAMIA.

GYMNOSPERMIA.

369. **TEUCRIUM.** Germander. *Labiatae.*

1. **T. canadense:** hoary-pubescent; leaves ovate-lanceolate, serrate, all petiolate; stem erect; spike verticillate, crowded, long.

HAB. Low grounds. July—Aug. 4. *Stem* 12—18 in. high; *bracts* longer than the *cal.*; *fl.* purp.

2. **T. virginicum:** pubescent; leaves ovate-oblong, serrate; the upper ones subsessile; stem erect; spikes verticillate, crowded; bracts longer than the calyx.

HAB. Low grounds. June—Aug. 4. Resembles the foregoing. †.

370. MENTHA. Mint. *Labiatae*.

1. *M. viridis*: spikes interrupted; leaves sessile, lanceolate, acute, naked; bracts setaceous, and with the teeth of the calyx somewhat hairy.

HAB. Low grounds. Aug. 11. *A foot high; leav. smooth; spik. long; fl. purp. §.*

2. *M. canadensis*: flowers verticillate; leaves lanceolate, serrate, petiolate, hairy; stamens as long as the corolla.

HAB. Sandy soils. Aug.—Sept. 24. *A foot high; fl. pale purp.*

3. *M. borealis*: ascending, pubescent; leaves petiolate, oval-lanceolate, acute at each end; flowers verticillate; stamens exsert.

HAB. Low grounds. July—Sept. 11. *Stem 2 ft. high, hairy backwards.*

371. ISANTHUS. *Labiatae*.

S. cæruleus.

HAB. River shores. July—Aug. ☉. *Viscid-pubes., 1 ft. high; leav. oval-lan., acute, 3-nerved; fl. axill., pedunc., blue.*

372. HYSSOPUS. Hyssup. *Labiatae*.

H. nepetoides: spikes verticillate, cylindric; leaves subcordate, ovate, acuminate, dentate.

HAB. Woods. July. 11. *Stem 4—6 ft. high, pubes.; fl. yell.-wh., or pale purp.*

373. NEPETA. Catnep. *Labiatae*.

N. Cataria: flowers spiked; whorls slightly pedunculate; leaves petiolate, cordate, dentate, serrate.

HAB. Fields, &c. June—Sept. 11. *Stem 2—3 ft. high; fl. wh. punc. §.*

374. LAMIUM. Dead-nettle. *Labiatae*,

L. amplexicaule: floral leaves broadly cordate, sessile, amplexicaul, crenate, or incised; lower ones petiolate.

HAB. Cultivated grounds. April—Nov. ☉. Stem 6—8 in. high, suberect; fl. red. ♂.

375. GALEOPSIS. Hemp-nettle. Labiatae.

1. *G. Tetrahit*: stem hispid incrassated between the joints; leaves ovate, hispid, serrate; corolla twice as long as the calyx; upper lip nearly straight.

HAB. Waste grounds. July—Aug. ☉. Stem 1—2 ft. high; fl. verticill., purp. ♂.

2. *G. Ladanum*: stem hairy; internodes not swollen; leaves lanceolate, subserrate, hairy; upper lip of the corolla slightly crenate.

HAB. Waste grounds. July. ☉. A foot high; pet. very short; fl. rose-col. ♂.

376. STACHYS. Woundwort. Labiatae.

1. *S. hyssopifolia*: scarcely pubescent, erect, slender; leaves sessile, linear-lanceolate, remotely subdentate; whorls about 4-flowered.

HAB. Meadows. July. ☿. Stem 6—10 in. high; leav. sublin.; fl. purp.

2. *S. aspera*: stem erect, retrorsely hairy; leaves subpetiolate, lanceolate, acutely serrate, whorls about 6-flowered; calyx teeth divaricate, spiny.

HAB. Fields and wet places July ☿. A foot high; leav. pubes.; fl. purp.

3. *S. sylvatica*: leaves shortly petiolate, ovate, subcordate, acuminate; whorls 6-flowered; stem retrorsely pilose-hispid; calyx hispid, with lanceolate, very acute segments.

HAB. Woods. Aug. ☿. Stem 1—2 ft. high, erect; leav. hairy, obtusely ser.; fl. purp.

377. LEONURUS. Motherwort. Labiatae.

1. *L. Cardiaca*: inferior leaves ovate, 3-lobed; uppermost ones entire.

HAB. Waste places. July—Aug. ☿. Stem 2—3 ft. high. bran; leav. spread.; fl. vert., red-col. ♂.

378. GLECHOMA. Ground-Ivy. Labiatae.

G. hederacea: leaves reniform, crenate.

HAB. Hedges, &c. April—June. 4. *Root creep. ; stem decumb. ; fl. axill., in threes, blue. §.*

379. MARRUBIUM. Horebound. *Labiatae*.

M. vulgare: stem erect; leaves roundish-ovate, dentate, rugose; calyx with 10 setaceous, uncinat teeth.

HAB. Road-sides, &c. Stem 12—18 in. high, whitish pub. ; leav. woolly beneath. §.

380. PYCNANTHEMUM. Mountain-mint. *Labiatae*.

*. *Stamens exerted*.

1. *P. incanum*: leaves oblong-ovate, shortly petiolate, hoary-tomentose; heads of flowers pedunculate, compound, lateral and terminal; bracts setaceous.

HAB. Rocky hills. July—Aug. 4. *Plant whitish, soft, 2 ft. high ; fl. pale red.*

2. *P. aristatum*: leaves lanceolate-ovate, subserrate, on very short petioles, whitish; heads sessile; bracts awned.

HAB. Dry woods. July—Aug. 4. *Stem 1—2 ft. high ; upper leav. hoary.*

3. *P. linifolium*: stem straight, much branched, somewhat scabrous; leaves linear 3-nerved, very entire, smooth; heads terminal, in a fasciculate corymb.

HAB. Dry swamps. Aug. 4. *Stem 12—18 in. fastig. branch ; fl. minute, wh.*

**. *Stamens included*.

4. *P. lanceolatum*: stem straight, branched, subpubescent; leaves subsessile, linear-lanceolate, entire; heads sessile, fasciculate-corymb.

HAB. Dry hills. Aug. 4. *Stem 2 ft. high ; leav. long, nerved ; fl. minute, wh.*

5. *P. verticillatum*: leaves ovate-lanceolate, very entire; whorls sessile, compact; bracts acuminate.

HAB. Mountains. July—Aug. 4.

6. *P. muticum*: leaves ovate-lanceolate, subdentate, smoothish; heads terminal; bracts lanceolate, rather acute.

HAB. Rocky hills. July—Aug. 4. Stem 2 ft. high; leav. large; fl. wh.

381. CLINOPODIUM. Wild-basil. Labiatae.

C. vulgare: leaves ovate, subserrate; whorls hairy; pedicels branched; bracts setaceous.

HAB. Rocky woods. July. 4. Stem 2 ft. high, hairy; leav. petiol.; fl. purplish.

382. ORIGANUM. Wild marjoram. Labiatae.

O. vulgare: spikes roundish, paniced, fasciculate, smooth; bracts ovate, longer than the calyx; leaves ovate, entire.

HAB. Fields, &c. June—Oct. 24. Stems num., 1 ft. high; fl. rose-col., crowded.

383. DRACOCEPHALUM. Dragon's head. Labiatae.

1. *D. virginicum*: spikes elongated, crowded; bracts subulate; teeth of the calyx short, subequal; leaves linear-lanceolate, serrate.

HAB. Mountain meadows. Aug. 4. Stem 1—2 ft. high, simp., sm.; fl. spik., purp.

2. *D. denticulatum*: spikes elongated, with the flowers remote; bracts subulate; teeth of the calyx subequal; leaves obovate-lanceolate, toothed above.

[HAB. Mountains. June. 4. Stem 1 ft. high, sm.; leav. subundul.; fl. purp.

384. PRUNELLA. Self-heal. Labiatae.

P. vulgaris: leaves ovate-oblong, petiolate; upper lip of the calyx truncate, 3-awned; stem ascending.

HAB. Meadows. May—Aug. 24. A foot high, hairy; fl. in large ovate spikes, purp.

385. SCUTELLARIA. Skull-cap. Labiatae.

*. *Flowers axillary, solitary.*

1. *S. galericulata*: somewhat branched; leaves cordate-lanceolate, subsessile, crenate; flowers axillary, solitary.

HAB. Marshes. Aug. 4. Stem 12—18 in. high, minutely pubes. ; fl. large, blue.

2. *S. gracilis*: stem mostly simple ; leaves remote, broad-ovate, dentate, smooth and sessile, scabrous on the margin ; upper ones smaller, entire ; flowers axillary.

HAB. Shady rocks. June. 4. Stem 8—12 in. high, slend., erect ; leav. veined ; fl. very small.

** . *Flowers racemose.*

3. *P. lateriflora*: much branched, smoothish ; leaves on long petioles, ovate, dentate, sometimes cordate, membranaceous ; racemes lateral, leafy.

HAB. Wet meadows. July—Aug. 4. Stem 1—2 ft. high ; racem. long ; fl. small, blue.

4. *S. integrifolia*: stem nearly simple, densely pubescent ; leaves subsessile, oblong, obtuse, cuneate at the base, obscurely toothed ; racemes loose, leafy.

HAB. Swamps. June. 4. Stem 18 in. high ; fl. large, blue.—*Plant very bitter.*

5. *S. hyssopifolia*: minutely and densely pubescent, branched ; leaves lanceolate-linear, very entire ; rare.

HAB. Swamps. June. 4. Stem 1 ft. high ; leav. obtuse ; fl. very large.

6. *S. ovalifolia*: nearly simple, pubescent ; leaves remote, rhombic-ovate, obtuse, attenuated at the base into the petiole, rounded-crenate ; racemes terminal, loose ; bracts lanceolate, entire.

HAB. Rocky woods. July. 4. Stem 1½—2 ft. high ; lower leav. cord. ; fl. large.

7. *S. canescens*: branched ; leaves ovate, acute, petiolate, acutely toothed, under side, with the bracts and flowers hoary-villose ; lower leaves subcordate ; racemes pedicellate, subpaniculate, axillary and terminal ; bracts ovate-lanceolate, longer than the calyx.

HAB. Woods. July. 4. Stem 2—3 ft. high ; leav. large, whitish beneath ; fl. deep blue.

386. TRICHOSTEMA. Blue curls. *Labiatae*.

T. dichotoma: leaves rhombic lanceolate, attenuate at the base, pubescent.

HAB. Dry hills. July—Sept. ☉. *Plant aromatic.*—Stem 6—10 in. high, brach.; fl. blue.

β. *linearis*: leaves linear, smoothish.

HAB. Sandy fields. Stem viscidly pubescent.

ANGIOSPERMIA.

387. PHRYMA.

P. leptostachya.

HAB. Rocky woods. July—Aug. 4. Stem 2—3 ft. high; leav. loose, ovate, dent., petiol.; spikes very long, slend.; fl. purp.; fr. reflex.

388. VERBENA. Vervain. *Verbenaceae*.

*. *Leaves laciniate*.

1. *V. hastata*: erect; leaves lanceolate, acuminate, incisely-serrate; inferior ones lobed or subhastate; spikes filiform, erect, paniced; flowers tetrandrous.

HAB. Low grounds. July—Aug. 4. Stem 3—5 ft. high; leav. rough; fl. purp.

2. *V. spuria*: stem decumbent, much branched, divaricate; leaves many-cleft; spikes filiform, loose; bracts longer than the calyx.

HAB. Sandy fields. Aug. Nov. ☉ ♂. Stem 1—2 ft. long; leav. scab.; fl. pink.

**. *Leaves entire*.

3. *V. urticifolia*: erect, subpubescent; leaves oval-acute, serrate, petiolate spikes filiform, loose, axillary and terminal; flowers tetrandrous.

HAB. Fields and road-sides. July—Aug. 4. Stem 2—3 ft. high; spik. not imbric.; fl. wh.

4. *V. angustifolia*: erect, mostly simple; leaves linear-lanceolate, attenuate at the base, remotely toothed, with elevated veins; spikes filiform solitary, axillary and terminal.

HAB. Rocky hills. July. 4. A foot high, hairy; leav. rugose; fl. blue.

389. ZAPANIA. *Verbenaceæ*.

1. *Z. nodiflora*: leaves ovate-cuneiform, serrate above; spikes capitate-conic, solitary, on long peduncles; stem herbaceous, creeping.

HAB. Banks of rivers. July. 4. Stem 6—8 in. long; pedunc. filif.; head small, blue.

2. *Z. lanceolata*: leaves linear-lanceolate, acutely serrate; spikes capitate-conic, on elongated peduncles; stem herbaceous, creeping.

HAB. Banks of rivers. July. 4. Fl. white. (Blue?)

390. HERPESTIS. *Scrophulariæ*.

H. cuneifolia: very smooth; leaves cuneate-obovate, obscurely crenate above; peduncles as long as the leaves.

HAB. Overflowed banks of rivers. Aug. 4. Leav. thick; fl. minute, pale blue.

391. LIMOSELLA.

L. subulata: leaves linear, very narrow, scarcely dilated at the apex; scape 1-flowered, as long as the leaves.

HAB. Muddy shores. Aug. 4. An in. high; leav. rad.; fl. minute, bl.-white.

SCROPHULARIA. Figwort. *Scrophulariæ*.

1. *S. marilandica*: leaves cordate, serrate, acute, rounded at the base; petioles ciliate below; panicle fasciculate, loose, few-flowered; stem obtuse-angled.

HAB. Woods. July—Oct. 4. Stem 2—4 ft. high, smooth; leav. thin; fl. gr.-purp.

2. *S. lanceolata*: leaves lanceolate, unequally and incisely serrate, acute at the base; petioles naked; fascicles of the panicle corymbed.

HAB. Woods. Aug. 4. Stem 3 ft. high, smooth; leav. repand.-serr.; fl. gr.-purp.

393. BIGNONIA. Trumpet-flower. *Bignoniacea*.

B. radicans: leaves pinnate; leaflets ovate, dentate, acuminate; corymb terminal; tube of the corolla three times as long as the calyx; stem creeping.

HAB. Banks of rivers. July—Aug. ½. Stem climbing by radicles; fl. very large, scarl.

394. RUELLIA.

R. strepens: erect, hairy; leaves petiolate, lanceolate-ovate, very entire; peduncles 1—3-flowered; segments of the calyx lanceolate, hispid, half as long as the tube of the corolla.

HAB. Woods. July. ¼. Stem 8—12 in. high; leav. opp.; fl. axill. and term., blue or white.

395. BUCHNERA.

B. americana: stem simple; leaves lanceolate, subdentate, rough, 3-nerved; spikes with the flowers remote.

HAB. Sandy woods. Aug. ¼. A foot high; leav. opp.; fl. blue.—Plant dries black.

396. ANTIRRHINUM. Toad-flax. *Scrophulariæ*.

*. Stems procumbent.

1. *A. Elatine*: procumbent, hairy; leaves alternate, hastate, very entire; peduncles solitary, very long.

HAB. Sandy fields. July. ☉. Stem 1—2 ft. long; pedunc. axill.; fl. small, bl.-wh. §.

**. Stems erect.

2. *A. Linaria*: leaves linear-lanceolate, crowded; spikes terminal; flowers imbricate; calyx smooth, shorter than the spur.

HAB. Road sides, &c. June—Nov. ¼. Stem 1—2 ft. high; leav. pale-gr.; fl. yellow.

3. *A. canadense*: assurgent, smooth, mostly simple; leaves scattered, erect, linear, obtuse; flowers racemose; scions procumbent.

HAB. Wet or dry soils. July—Nov. ☉. *A foot high, very slend. ; fl. very sm., blue.*

397. COLLINSIA.

C. verna: leaves ovate-oblong, sessile, obtuse, the inferior ones attenuated into long petioles.

HAB. River banks. July. ☉. *A foot high, minutely pubes. ; pedunc. axill. ; fl. particoloured.*

398. GERARDIA.

*. *Flowers purple.*

1. *G. purpurea*: stem angular, much branched; leaves scabrous linear, long and acute; flowers subsessile; segments of the calyx subulate.

HAB. Sandy soils and swamps. August—Oct. ☉. *Stem 1—2 ft. high, slend. ; fl. large, axill.*

2. *G. maritima*: stem angular; leaves linear, fleshy, short, rather obtuse; flowers pedunculate; upper segments of the corolla ciliate; calyx truncate, with minute teeth.

HAB. Salt marshes. July—Sept. ☉. *Stem 6—12 in. high ; fl. middle-sized.*

3. *G. tenuifolia*: much branched; leaves linear, acute, scabrous; peduncles axillary, longer than the flowers; teeth of the calyx acute.

HAB. Fields and woods. Aug.—Sept. ☉. *Stem 6—10 in. high ; fl. spread., smooth.*

4. *G. auriculata*: subsimple, scabrous; leaves ovate, lanceolate, auriculate at the base, very entire, sessile; flowers sessile, axillary.

HAB. Fields and mountains. Aug. ☉. *Stem 8—12 in. high ; fl. middle-sized.*

**. *Flowers yellow.*

5. *G. flava*; pubescent; stem nearly simple; leaves subsessile, lanceolate, very entire or dentate; the inferior ones incised; flowers subsessile.

HAB. Woods. Aug.—Sept. 4. *Stem 2—3 ft. high, fl. large.*

6. *G. glauca*: smooth; stem paniculate; leaves pe-

tiolate, pinnatifid ; upper ones lanceolate ; flowers pedicellate.

HAB. Woods. Aug.—Sept. Stem 3—5 ft. high, glauc ; leav. pale beneath.

7. *G. pedicularia* : stem paniculate, pubescent ; leaves smoothish, oblong, pinnatifid ; segments uncinat, serrate ; flowers axillary, pedicellate ; segments of the calyx leafy, incisely dentate.

HAB. Woods and mountains. July—Aug. 4. Stem 2 ft. high, much branch.

399. PEDICULARIS. Lousewort. *Scrophularinæ*.

1. *P. pallida* : stem smooth, branched, with pubescent lines ; leaves subopposite, lanceolate ; pinnatifidly toothed and crenate, scabrous on the margin ; galea of the corolla truncated at the apex ; calyx bifid with rounded segments.

HAB. Swamps. Sept. 4. Stem 1—2 ft. high ; fl. large, straw-yell. and purp.

2. *P. canadensis* : stem simple : leaves pinnatifid, incisely toothed ; spike leafy at the base, hairy ; galea of the corolla with two setaceous teeth ; calyx truncate downward.

HAB. Wet meadows. May—July. 4. Stem 8—12 in. high ; fl. yell. and purp.

3. *P. gladiata* : stem simple ; leaves lanceolate, pinnatifid, dentate ; spikes leafy, hairy, with the flowers alternate ; capsule terminating in a long flat point.

HAB. Wet meadows. May—June. 4. Fl. yell. and purp.—A var. of No. 2?

400. MIMULUS. Monkey-flower.

1. *M. ringens* : erect, smooth ; leaves sessile, lanceolate, acuminate ; peduncles axillary, longer than the flower.

HAB. Wet meadows. Aug. 4. Stem 2 ft. high, ang ; fl. large, pale purp.

2. *M. alatus* : erect, smooth ; leaves petiolate, ovate, acuminate, serrate ; peduncles axillary, shorter than the flowers ; stem quadrangular, winged.

HAB. Wet meadows. Aug. 4. Stem 2 ft. high ; teeth of the cal. obl. acum.

401. CHELONE. Shell-flower.

C. glabra: smooth; leaves opposite, lanceolate oblong, acuminate, serrate; flowers in dense spikes.

HAB. Wet places. Aug.—Oct. 4. Stem 2 ft. high, simp.; fl. large, wh. or rose-col.

402. PENTSTEMON.

1. *P. pubescens*: stem pubescent; leaves lanceolate-oblong, sessile; repandly serrulate; flowers paniculate; sterile filament bearded above the middle.

HAB. Mountain meadows. June. 4. Stem 1½ ft. high, slend.; fl. pale purp.

2. *P. laxigatum*: smooth; leaves ovate-oblong, amplexicaul at the base, denticulate; the inferior very entire; flowers paniculate; sterile filament bearded above.

HAB. Low stony grounds. July. 4. Stem 1—2 ft. high; fl. pale purp.

403. MARTYNIA.

M. proboscidea: stem decumbent, branched; leaves alternate, cordate, very entire, villous.

HAB. River banks. Aug.—Sept. ☉. Stem thick, viscid-pub.; fl. large, wh., punct.

404. SCHWALBEA. *Scrophularinæ*.

S. americana.

HAB. Sphagnous swamps. Sept. 4. Stem 12—18 in. high, simp.; leav. alt. obl. entire; fl. racem., subsess., dark-purp.

405. EUCHROMA. Painted-cup. *Scrophularinæ*.

E. coccinea: leaves and coloured bracts pinnatifidly 3-cleft; segments divaricate; calyx 2-cleft, nearly equal with the corolla; segments retuse and emarginate.

HAB. Wet meadows. May—June. 4. Stem 3—12 in. high; bracts scarl; cor. yell.

406. BARTSIA. *Scrophularinæ*.

B. pallida: leaves alternate, linear, undivided; upper ones lanceolate; floral ones subovate, slightly toothed at the end; all 3-nerved; teeth of the calyx entire.

HAB. High mountains. Aug. 4. Stem pubes.; fl. yell., pubes.

407. MELAMPYRUM. Cow-wheat. *Melampyraceæ*.

M. lineare: leaves linear-lanceolate; the floral ones with setaceous teeth at the base; flowers axillary.

HAB. Woods. June—July. ☉. Stem 8—10 in. high, bran.; fl.-leav. ovate-lan.

408. OROBANCHE. Broom-rape. *Orobanchææ*.

1. *O. americana*: stem very simple; imbricate with oval-lanceolate scales; spike terminal, smooth; corolla recurved, with the stamens exerted.

HAB. Woods. July. 4. Stem 4—6 in. high, very thick, br.-yell., leafless, scaly; fl. bract.

2. *O. uniflora*: stem very short; peduncles 2, elongated, scapiform, 1-flowered, naked; scales smooth, concave; lobes of the corolla oblong-oval, with a pubescent coloured margin.

HAB. Woods. May—July. 4. Pedunc. 4—6 in. long, subpubes.; fl. recurv., bl.-wh.

409. EPIPHAGUS. Beech-drops. *Orobanchææ*.

E. virginiana.

HAB. Beech woods. Sept. 4. Leafless, branched, smooth; 8—12 in. high; fl. distant; abort. ones larger, purplish.

TETRADYNAMIA.

SILICULOSA.

410. CAKILE. Silicle compressed, of 2 single-seeded joints; superior joint with an erect single

seed; inferior with a pendulous (sometimes abortive) seed.

411. **THLASPI.** *Silicle* compressed, emarginate, many-seeded; valves carinate, (often winged) *Filam.* without teeth, distinct. *Cal.* equal at the base.
412. **DRABA.** *Silicle* entire, oval or oblong; valves flat or convex; cells many-seeded. *Seeds* not margined; *cotyledons* accumbent.* *Filam.* without teeth.
413. **ALYSSUM.** *Silicle* orbicular, or elliptical; valves flat, or convex in the centre. *Seeds* 2—4 in each cell, compressed, sometimes membranaceously winged; *cotyledons* accumbent. *Cal.* equal at the base. *Pet.* entire. *Stam.* mostly toothed.
414. **LEPIDIUM.** *Silicle* ovate or subcordate; valves carinate, dehiscent; cells 1-seeded. *Cotyledons* incumbent.
415. **CAMELINA.** *Silicle* subovate, many-seeded; valves turgid. *Cotyledons* incumbent. *Filam.* without teeth.
416. **SUBULARIA.** *Silicle* oval, many-seeded; valves convex. *Stig.* sessile. *Cotyledons* incumbent, linear, biplicate.

SILIKUOSA.

417. **DENTARIA.** *Silique.* lanceolate; valves, flat, nerveless, often opening elastically; *receptacles* not winged. *Funiculus* dilated. *Seeds* in a single series, ovate, immarginate; *cotyledons* accumbent.
418. **CARDAMINE.** *Silique* linear, with the margins truncate; valves flat, nerveless, often opening elastically, narrower than the dissepiment. *Seed* not margined, with a slender *funiculus*.
419. **ARABIS.** *Silique* linear; valves flat, 1-nerved. *Seeds* in a single row. *Cotyledons* accumbent. *Cal.* erect.

* The *cotyledons* are *accumbent* when the back of one of them is applied to the curved *radicle*: *incumbent* when the edges of the *cotyledons* are applied to it.

420. BARBAREA. *Silique* 4-edged. *Cotyledons* accumbent. *Seeds* in a single row. *Cal.* equal at the base, erect. Shorter *filaments* with intermediate glands.
421. NASTURTIUM. *Silique* subterete, often short; valves concave, nerveless, not carinate. *Cal.* equal, spreading. *Cotyledons* accumbent.
422. SISYMBRIUM. *Silique* subterete. *Cotyledons* incumbent, sometimes oblique, flat. *Cal.* mostly spreading, equal at the base.
423. HESPERIS. *Silique* subquadrangular, or ancipital. *Stig.* subsessile, of 2 connivent lobes. *Cotyledons* incumbent, flat. *Cal.* closed, sulcate at the base.
424. SINAPIS. *Silique* subterete, 2-valved; (sometimes of 2 articulations, of which the upper one is nerveless.) *Cotyledons* conduplicate. *Seeds* globose, in a single row. *Cal.* spreading.
425. RAPHANUS. *Silique* valveless. *Cotyledons* conduplicate. *Cal.* closed.
426. CLEOME. *Cal.* 4-leaved, spreading. *Pet.* 4, unequal. *Stam.* 6, unequal, often connected at the base. *Silique* stipitate in the calyx.
427. POLANISIA. *Cal.* 4-leaved, spreading. *Pet.* 4, unequal. *Stam.* 8—32. *Silique* sessile in the calyx.

TETRADYNAMIA.

SILICULOSA.

410. CAKILE. Sea-rocket. *Cruciferae*.

C. maritima : β . *americana* : leaves cuneate-oblong, obtuse, sinuately toothed; joints of the silicle 1-seeded; the uppermost ovate, acute.

HAB. Sea-coast. July—Oct. ☉. *Plant* fleshy, heavy, branch.; *fl.* purp., corymb.

411. THLASPI. Penny-cress. *Cruciferae*.

1. *T. arvense* : leaves oblong-sagittate, coarsely toothed.

ed, smooth; silicle suborbicular, longer than the pedicel; its wings dilated longitudinally.

HAB. Fields. June. ☉. *Stem erect, 8—12 in. high; leav. smooth; fl. wh.*

2. *T. tuberosum*: leaves rhombic-ovate, obsoletely dentate, smooth, sessile; radicle ones on long petioles; stem pubescent; root tuberous; silicle orbicular.

HAB. Pennsylvania. April—May. *Stem 4—5 in. high; fl. rather large, rosaceous.*

3. *T. Bursa-pastoris*: silicle triangular-obcordate, without wings; cells many-seeded; radicle leaves pinatifid.

HAB. Pastures, &c. March—Oct. ☉. *Stem 6—12 in. high; fl. small, corymb., wh. §.*

412. DRABA. Whitlow-grass. *Cruciferae*.

*. *Petals entire.*

1. *D. arabisans*: stem leafy, somewhat branched, subpubescent; leaves lanceolate, acutely dentate; silicle linear, smooth, longer than the pedicel.

HAB. Rocks. ♂. *Silicle elongated, acuminate, contorted.*

**. *Petals bifid.*

2. *D. verna*: scapes naked; leaves lanceolate, subincised, hairy; silicle elliptical-oblong.

HAB. Fields and hills. March—May. ☉. *leav. all rad.; scape 2—6 in. long; fl. wh.*

3. *D. caroliniana*: stem leafy at the base, hispid, naked and smooth at the apex; leaves ovate-roundish, hispid, entire, hispid; silicle linear, smooth, longer than the pedicels.

HAB. Fields. April. ☉. *Stem 1—2 in. high; silicle 4—5 in. long; fl. wh.*

413. ALYSSUM. Gold-of-Pleasure. *Cruciferae*.

A ? *dentatum*: stem erect and herbaceous; raceme-paniculate; radical leaves subbruncinately dentate, somewhat scabrous; cauline linear-lanceolate,

sessile, nearly smooth ; silicle elliptical, pubescent shorter than the pedicel.

HAB. Rocks. May. 4. Stem 6 in. high ; pubes. thin ; style long, persist.

414. LEPIDIUM. Pepper-wort. *Cruciferae*.

1. *L. virginicum* : leaves linear-lanceolate, incisely serrate, smooth ; flowers with 2—4 stamens ; silicle orbicular, emarginate ; stem branched above.

HAB. Sandy fields. June—Oct. ☉. A foot high, panic. above ; fl. minute, wh.

2. *L. campestre* : cauline leaves sagittate, dentate ; silicle ovate, winged, emarginate, scaly-punctate.

HAB. Hills. May. ☉. A foot high, erect ; leav. pubes. ; fl. wh.

415. CAMELINA. *Cruciferae*.

C. sativa : silicle obovate-pyriform, margined, tipped with the pointed style ; leaves subentire, lanceolate, sagittate.

HAB. Hills. June. ☉. Stem $1\frac{1}{2}$ ft. high, branch. ; fl. yell., corymb.

416. SUBULARIA. Owl-wort. *Cruciferae*.

S. aquatica.

HAB. Margins of ponds. July. ☉. Leav. rad. subul. ; scape 1—2 in. high ; fl. wh.

SILIKUOSA.

417. DENTARIA. Toothwort. *Cruciferae*.

1. *D. laciniata* : leaves in threes, ternate ; leaflets 3-parted ; segments oblong, unequally and incisely dentate ; root moniliform.

HAB. Rocky woods. April—May. Stem 8 in. high ; root tub. ; fl. purplish.

β. *pinnatifida* : leaflets subpinnatifidly laciniate.

2. *D. diphylla* : stem 2-leaved ; leaflets ternate, subovate, unequally and incisely dentate ; root dentate.

HAB. Woods. May. 4. Stem 6—8 in. high; leaflet large, fl. yellowish.

3. *D. heterophylla*: stem 2-leaved; leaves ternate, petiolate, leaflets linear, sub lanceolate, acute, entire; radical leaflets ovate-oblong, incisely and coarsely toothed.

HAB. Shady woods. June. 4. Root tub.; stem low; leaflet ciliate; fl. purp.

4. *D. maxima*: leaves numerous, alternate, petiolate; leaflets ternate, suboval, incisely dentate; lateral ones lobed; axils without glands; racemes lateral and terminal.

HAB. Woods. 4. Stem $1\frac{1}{2}$ ft. high; leav. 5—7; leaflet very broad; fl. purp.

413. CARDAMINE. Lady's smock. *Cruciferae*.

*. *Leaves undivided*.

1. *C. rhomboidea*: leaves ovate-rhomboid, obscurely repand-dentate, smooth; inferior ones on long petioles; root tuberous and fibrous.

HAB. Wet meadows. May—June. 4. Stem 8—10 in. high, subpubes.; fl. large, wh.

2. *C. rotundifolia*: leaves suborbicular, nearly entire, smooth, petiolate; stem weak, procumbent; root fibrous.

HAB. High mountains. July. 4. Siliques spreading, Slend.; fl. sm., wh.

**. *Leaves divided*.

3. *C. pennsylvanica*: smooth, branched; leaves pinnate, often sublyrate; leaflets roundish-oblong obtuse, angularly toothed; stem erect; petals oblong-linear.

HAB. Wet places. May. July. 4. Stem. 8—12 in. high; term. leaflet large; sil. erect.

β. gracilis: stem slender, weak; leaves with few and narrow segments.

HAB. Wet woods. July. 4. Stem subdecumb. 4—6 in. long; fl. minute, wh.

4. *C. virginica*: smooth, erect; leaves pinnate; leaflets lanceolate, subauriculate; stem erect; siliques long, straight and erect.

HAB. Moist rocks. May—June. 4. Stem 5—8 in. high; leaflet small, subpubes.; fl. wh.

5. *C. ? teres*: leaves sublyrate-pinnatifid; segments oval-oblong; the terminal ones somewhat 3-lobed; siliques short, erect, terete.

HAB. Wet places. June—July. 4.

6. *C. hirsuta*: leaves pinnate, hairy; leaflets of the radical ones roundish, petiolate; those of the upper ones oblong, subsessile; petals oblong; siliques erect.

HAB. Pennsylvania. May. ☉.

419. ARABIS. Wall-Cress. *Cruciferae*.

1. *A. sagittata*: leaves subdentate, rough, with the pubescence often branched; radical ones ovate or oblong, attenuated into a petiole; of the stem lanceolate, sagittate-cordate; pedicels as long as the calyx; siliques straight and erect.

HAB. Hills. June. ☉ ♂. Stem $1\frac{1}{2}$ ft. high, simp., straight; fl. small, wh.

2. *A. thaliana*: leaves hairy, subdentate; radical ones oblong, petiolate; stem branched, hairy at the base, siliques ascending; pedicels much longer than the calyx.

HAB. Dry hills. April—May. ☉. Stem 2—4 in. high, erect; siliq. slend.

3. *A. lyrata*: stem and upper leaves smooth and glaucous; radical leaves lyrate-pinnatifid, often pilose; stem branched at the base; pedicels spreading; silique erect.

HAB. Rocky hills. April—July. ♂. Stem 8—12 in. high; caul. leav. lin.; fl. large.

4. *A. lævigata*: stem leaves linear, oblong, sagittate, smooth; the lower ones subdentate; radical ones obovate; pedicels erect; siliques very narrow and long, at length pendulous.

HAB. Rocky hills. May. 4. Stem 2 ft. high; sil. $2\frac{1}{2}$ in. long; root nerved.

4. *A. canadensis*: stem leaves sessile, oblong-lanceolate, narrow at the base, pubescent, pedicles pubescent, reflexed in the fruit; siliques pendulous, sub-falcate, nerved.

HAB. Rocky hills. June. 4. Stem 2 ft. high; ped. 3 times as long as cal.

420. BARBAREA. Winter-cress. *Cruciferae*.

B. vulgaris: lower leaves lyrate; terminal lobe roundish; upper ones obovate, dentate.

HAB. Old fields. June. 4. Stem 1—2 ft. high, smooth, leav. very sm.; fl. yell.

421. NASTURTIIUM. Nasturtium. *Cruciferae*.

1. *N. officinale*: leaves pinnate; leaflets ovate, subcordate, repand.

HAB. In water. June—July. 4. Stems decumb. term. leaf. large; fl. wh.

2. *N. palustre*: leaves lyrate-pinnatifid; lobes confluent, unequally dentate, smooth; petals as long as the calyx; siliques short, turgid; root fusiform.

HAB. Wet places. July. ☉. Stem 1½ ft. high, fl. yell.; pedicel short.

3. *N. amphibium*: leaves oblong-lanceolate, pinnatifid or serrate; root fibrous; petals longer than the calyx; siliques elliptical.

HAB. Wet places. June—July. 4. Stem 1—2 ft. high; fl. yell.; sil. subreflex.

422. SISYMBRIUM. Hedge-mustard. *Cruciferae*.

1. *S. officinale*: leaves runcinate, and with the stem, hairy; siliques subulate, appressed.

HAB. Fields. June—Oct. ☉. Stem 1—2 ft. high, branch.; fl. minute, yell.

2. *S. Sophia*: leaves bipinnate; segments oblong-linear, incised; petals shorter than the calyx; calyx twice as short as the pedicel.

HAB. Sandy fields. July. ☉. Stem 8—12 in. high; leav. sm. or pubes.; fl. yell.

423. HESPERIS. Dame's violet. *Cruciferae*.

H? *pinnatifida*: leaves acutely serrate; superior ones lanceolate; inferior spinnatifid-lyrate; pedicel, at length longer than the calyx.

HAB. Woods. July. 4. Stem 1 ft. high; fl. pale purp.; pet. entire.

424. SINAPIS. Mustard. *Cruciferae*.

S. nigra: siliques smooth and even, subquadrangular, appressed; inferior leaves lyrate; upper ones lanceolate, entire, petiolate.

HAB. Waste grounds. June—July. ☉. Stem 2—4 ft. high; upper leav. deflex.; fl. yell.

425. RAPHANUS. Radish. *Cruciferae*.

R. Raphanistrum: silique jointed, 1-celled, striate, 3—8-seeded; style long; leaves simply lyrate.

HAB. Fields. June—July. ☉. Stem 1—2 ft. high, hispid; leav. scab.; fl. yell. §.

426. CLEOME. *Capparides*.

C. pentaphylla: smoothish; leaves quinate; the lower and floral ones ternate; leaflets entire and subserrulate; stamens inserted on the pedicel of the germen.

HAB. Cultivated grounds. July. ☉. Stem 2 ft. high, viscid; pet. wh., on filif. claws.

427. POLANISIA. *Capparides*.

P. graveolens: viscidly pubescent, leaves ternate; leaflets elliptical-oblong; stamens 8—12; siliques oblong, attenuate at the base, muricate with a glandular pubescence.

HAB. Sandy shores. June. 4. Stem 1 ft. high; fl. racem., red.-wh.—Plant fetid.

MONADELPHIA.

PENTANDRIA.

428. PASSIFLORA. Cal. 5-parted, coloured. Pet. 5, inserted upon the calyx. Nect. a filamentous crown. Pepo (berry) pedicellate.

DECANDRIA.

429. GERANIUM. *Cal.* 5-leaved, equal. *Pct.* 5, equal. *Stam.* 10; 5 alternate ones longer, with nectariferous glands at the base. *Pericarps* 5, with long awns, united to elongated receptacles, at length separating elastically from the summit to the base : *awns* smooth internally.

POLYANDRIA.

130. SIDA. *Cal.* 5-cleft, simple, often angular. *Style* many-cleft at the summit. *Capsules* numerous, arranged circularly, 1-celled, 1—3-seeded.
431. ALTHÆA. *Cal.* double; the exterior 6—9-cleft. *Capsules* numerous, 1-seeded, arranged circularly.
432. MALVA. *Cal.* double; the exterior mostly 3-leaved. *Capsules* numerous, 1-celled, 1-seeded, arranged circularly.
433. HIBISCUS. *Cal.* double; the exterior many-leaved. *Stig.* 5. *Caps.* 5-celled; cells many-seeded.

MONADELPHIA.

PENTANDRIA.

428. PASSIFLORA. Passion flower. *Passiflora.*
1. *P. lutea* : leaves cordate, 3-lobed, obtuse, smooth; petioles without glands; peduncles axillary, by pairs; petals much longer than the calyx.
HAB. Banks of rivers. June—Aug. 4. *Climb.,* *slend.*; *fl. small, gr.-yell.*
2. *P. incarnata* : leaves 3-lobed, serrate; lobes oblong, acute; petioles with two glands; involucre 3-leaved; leaflets lanceolate, glandularly dentate; rays of the nectary longer than the corolla.
HAB. Banks of rivers. Sept. 4. *Stem long, climb.,* *pet. white; nect. purp.*

DECANDRIA.

429. GERANIUM. *Geraniaceæ*.

1. *G. maculatum*: stem angular, erect, retrorsely pubescent, dichotomous; leaves 3—5-parted, incised; radical ones on long petioles; upper ones opposite, sessile; petals entire; filaments scarcely ciliate at the base.

HAB. Woods. May—June. 4. Stem 1—2 ft. high; leaves hairy; fl. large, purp.

2. *G. carolinianum*: diffuse, pubescent; leaves 5-parted; segments 3-cleft; incised peduncles crowded, subfasciculate; petals emarginate, as long as the awned calyx; pericarps hairy; seeds smooth.

HAB. Hills and fields. May—June. ☉. Stem 12—18 in. long, much bran.; fl. small, wh.

3. *G. pusillum*: leaves subreniform, 7-lobed; lobes 3-cleft; petals subemarginate, as long as the pointless calyx; pericarps pubescent, not rugose; seeds smooth.

HAB. Pennsylvania. May. ☉.

4. *G. dissectum*: diffuse, pubescent; leaves 5-parted; segments 3-cleft, linear; petals emarginate, as long as the awned calyx; pericarps hairy; seeds reticulate.

HAB. Dry hills. June—July. ☉. Stem 1 ft. high, pubes.; fl. small, pale red.

5. *G. Robertianum*: leaves 3—5-parted; segments pinnatifidly 3-cleft; petals entire, much longer than the angular awned calyx; pericarps small, reticulate, rugose; seeds smooth.

HAB. Rocky places. May—Sept. ☉. Stem long, red; fl. small, pale purp.

POLYANDRIA.

430. SIDA. Indian Mallow. *Malvaceæ*.

1. *S. spinosa*: leaves ovate, lanceolate, dentate, with the tubercles at the base spiny; pedicels axillary,

solitary, shorter than the stipules and petioles ; capsules 5, birostrate.

HAB. Pine barrens. July—Aug. ☉. Stem 1—2 ft. high, branch.; fl. yell.

2. *S. Napæa*: leaves palmately 5-lobed, smooth ; lobes oblong, acuminate, dentate ; peduncles many-flowered ; capsules 10, pointless, acuminate.

HAB. Shady rocky places. July. 4. Stem 3—4 ft. high ; fl. small wh.

3. *S. dioica*: leaves palmately 7-lobed, scabrous ; lobes lanceolate, incisely dentate ; peduncles many-flowered, bracteate, subcorymbed ; flowers diœcious ; capsules 10, pointless.

HAB. Stony ground. Oct. 4. Stem 4—5 ft. high, branch. ; fl. small wh.

4. *S. Abutilon*: leaves roundish-cordate, acuminate, dentate, tomentose ; peduncle shorter than the petioles ; capsules 15, truncate, birostrate, hairy.

HAB. Waste places. July—Aug. ☉. Stem 2—5 ft. high ; leav. large ; fl. orange. §

431. ALTHÆA. Marsh Mallow. *Malvaceæ*.

A. officinalis: leaves soft-tomentose, cordate and ovate, dentate, entire or somewhat 3-lobed ; peduncles axillary, many-flowered, much shorter than the leaves.

HAB. Borders of salt marshes. Aug.—Sept. 4. Stem 2 ft. high ; fl. large, purp. §

432. MALVA. Mallow. *Malvaceæ*.

M. rotundifolia: stem somewhat prostrate ; leaves roundish, cordate, obtusely 5-lobed ; fructiferous pedicels bent downward, as well as the petioles, pubescent ; corolla twice the length of the calyx.

HAB. Waste places. June—Oct. 4. Root fusif. ; pedunc. axill. ; fl. small pink.

433. HIBISCUS. *Malvaceæ*.

1. *H. Moscheutos*: leaves ovate, acuminate, serrate, tomentose beneath ; petioles bearing the peduncles ; calyx tomentose ; capsule smooth.

HAB. Brackish marshes. Aug. 4. Stem 3—5 ft. high; fl. large, wh., with a crim. centre.

2. *H. palustris*: leaves ovate, dentate, somewhat 3-lobed, whitish-tomentose beneath, pedicels axillary, distinct from the petioles, articulate above the middle.

HAB. Borders of salt marshes. Aug. 4. Fl. large, entirely red.

3. *H. militaris*: leaves 3-lobed-hastate, acuminate, serrate, smooth; pedicels articulate in the middle; corolla subcampanulate; capsule ovate, acuminate, smooth; seeds silky.

HAB. River banks. July. 4. Stem 3 ft. high; fl. solit., axill., rose-col.

4. *H. virginicus*: leaves acuminate, unequally dentate, subvillose; inferior ones entire, cordate; superior ones ovate-cordate, 3-lobed; pedicels longer than the petioles; flowers cernuous; pistils nodding.

HAB. Borders of salt marshes. Aug. 4. Stem 3 ft. high; fl. sm., purple.

DIADELPHIA.

HEXANDRIA.

434. CORYDALIS. Cal. 2-leaved. Cor. 4-petalled. Filam. in 2 sets. Silique, 2-valved compressed, oblong, many-seeded.
435. FUMARIA. Cal. 2-leaved. Cor. 4-petalled, one of the petals gibbous at the base. Silicle ovate or globose, 1-seeded, not opening.

OCTANDRIA.

436. POLYGALA. Cal. 5-leaved, persistent; 2 of the leaflets wingshaped and coloured. Caps. obcordate, 2-celled, 2-valved. Seeds pubescent.

DECANDRIA.

* *Stamens all connected, (monadelphous.)*

437. AMORPHA. *Cal.* subcampanulate, 5-cleft. *Cor.* with the *vexillum* ovate, concave; *wings* and *keel* wanting. *Legume* 1—2-seeded, falcate.
438. LUPINUS. *Cal.* bilabiate. *Anth.* alternately oblong and roundish. *Legume* coriaceous, torulose.
439. CROTALARIA. *Vexillum* large and cordate; *keel* acuminate. *Filam.* united, with a dorsal fissure. *Legume* pedicellate, turgid.
440. GENISTA. *Cal.* bilabiate; upper lip with 2, lower with 3, teeth. *Vexillum* reflexed.

* * *Stamens diadelphous.*

† *Stigma pubescent.*

441. PISUM. *Cal.* with the segments leafy, equal. *Vexillum* with 2 protruding plaits. *Style* compressed, carinate, villous on the upper side. *Suture* of the *legume* naked.
442. LATHYRUS. *Style* flat, villous on the upper side, dilated upward. *Cal.* with the 2 upper segments shortest.
443. VICIA. *Style* transversely bearded beneath the *stigma*. *Cal.* with the 3 inferior segments straight and longer. *Vexillum* emarginate.
444. ERVUM. *Stig.* capitate, every where pubescent.

†† *Stigma smooth.*

445. ASTRAGALUS. *Keel* obtuse. *Legume* more or less completely 2-celled; inferior suture inflexed.

††† *Legume mostly 1-seeded. (Not of the preceding sections.)*

446. MELILOTUS. Flowers racemose. *Cal.* tubular, 5-toothed. *Keel* simple, shorter than the *wings* and *vexillum*. *Legume* longer than the calyx, rugose.
447. TRIFOLIUM. Flowers subcapitate. *Legume* covered by the *calyx*, without valves, 2—4-seeded.

448. **STYLOSANTHES.** *Cal.* tubular, very long bearing the corolla. *Germen* beneath the corolla. *Loment* 1—2-jointed, hooked.
449. **LESPEDEZA.** *Cal.* 5-parted; segments nearly equal. *Keel* transversely obtuse. *Loment* lenticular, unarmed, 1-seeded.

†††† *Legume mostly articulate. (Not of the preceding sections.)*

450. **HEDYSARUM.** *Cal.* 5-cleft. *Keel* transversely obtuse. *Loment* of several 1-seeded joints; joints truncate, compressed, mostly hispid.
451. **ÆSCHYNOMENE.** *Cal.* bilabiate. *Loment* compressed; one of the sutures straight, the other lobed; joints truncate, 1-seeded. *Stam.* divided into 2 equal sets.

††††† *Legume 1-celled, many-seeded. (Not of the preceding sections.)*

452. **PHASEOLUS.** *Keel*, with the stamens and style spirally twisted. *Legume* compressed, falcate. *Seeds* compressed, reniform.
453. **STROPHOSTYLES.** *Keel*, with the stamens and style spirally twisted. *Legume* terete, somewhat 2-celled. *Seeds* reniform, nearly cylindrical.
454. **APIOS.** *Cal.* subbilabiate, truncate, 1-toothed. *Keel* falcate, reflexing the apex of the *vexillum*. *Germen* sheathed at the base. *Legume* coriaceous, many-seeded.
455. **AMPHICARPA.** *Cal.* 4-toothed. *Pet.* oblong; *vexillum* with the sides appressed. *Stig.* capitate. *Legume* compressed, stipitate, 2—4-seeded.
456. **GALACTIA.** *Cal.* 4-toothed, with 2 bracts at the base. *Pet.* all oblong; *vexillum* broad, incumbent. *Anth.* oblong. *Stig.* obtuse. *Germen* on a naked stipe. *Legume* terete, many-seeded.
457. **CLITORIA.** *Cal.* tubular or campanulate, 5-toothed. *Cor.* resupinate; *vexillum* large, expanding, covering the wings. *Legume* linear, acuminate, many-seeded.
458. **ROBINIA.** *Cal.* campanulate, 4-cleft; upper segment 2-cleft. *Vexillum* roundish, expanded

and reflexed. *Legume* compressed, elongated, many-seeded. *Seeds* compressed, small.

459. TEPHROSIA. Teeth of the *calyx* subulate, nearly equal. *Stam.* monadelphous. *Legume* compressed, coriaceous.

460. MEDICAGO. *Keel* of the *cor.* deflexed from the *vexillum*. *Legume* compressed, spiral.

DIADELPHIA.

HEXANDRIA.

434. CORYDALIS. *Fumariacea*.

* *Corolla* with 1 spur at the base.

1. *C. glauca*: stem erect, branched; leaves glaucous, decomposed; segments cuneate, 3-cleft; bracts linear, shorter than the pedicels; siliques linear.

HAB. Rocks. May—Aug. ☉. ♂. Stem 8—18 in. high; root fusif.; fl. red and yell.

2. *C. aurea*: stem branched, diffuse; leaves glaucous, doubly pinnate; lobes oblong-linear; bracts lanceolate; siliques linear, 4 times as long as the pedicel.

HAB. Mountains. May. ☉. Stem 8—12 in. long; fl. small yell.

** *Corolla* with 2 spurs at the base.

3. *C. Cucullaria*: spurs straight, divaricate, acute; scape naked; raceme simple.

HAB. Shady rocks. Apr.—May. ♀. Root bulb.; leav. 2, decomp.; fl. large, wh.

4. *C. formosa*: spurs slightly curved, obtuse; raceme naked, somewhat compound; stigma 2-angled.

HAB. Shady rocks. May. ♀. Root bulb.; scape and pedunc. red; fl. large, rose-col.

*** *Petals* united, spongy.

5. *C. fungosa*: stem climbing; leaves furnished with tendrils; racemes axillary, corymbose, nodding; corolla bigibbous at the base.

HAB. Rocky hills. July—Aug. ♂. Stem long; leav. decomp.; fl. num., flesh-col.

OCTANDRIA.

436. POLYGALA. Milk-wort. *Polygalæ*.

1. *P. vulgaris*: leaves linear-lanceolate, rather obtuse; stem ascending; calycine wings ovate, obtuse, a little longer than the capsule; flowers in a terminal raceme.

HAB. River banks. 4. Stems num.; fl. blue. cristate; fructiferous cal. green. +

2. *P. senega*: stems numerous, erect, smooth, simple; leaves alternate, ovate-lanceolate; upper ones acuminate; racemes spiked; calycine wings orbicular; capsule elliptical, emarginate.

HAB. Woods. June—July. 4. Stems 1 ft. high; leav. pale gr.; fl. wh.

3. *P. paucifolia*: stem simple, erect, naked below; leaves ovate; terminal flowers, large, cristate; radical flowers apterous.

HAB. Woods and swamps. May—June. 4. Stem 3—4 in. high; leav. acute; fl. 3—4, purp.

4. *P. polygama*: stems numerous; leaves linear-oblong; attenuate downwards; racemes terminal and lateral, elongated; flowers sessile; radical racemes procumbent, with apterous flowers.

HAB. Fields. June—July. 4. Stems 4—8 in. high, angular; fl. purp.

5. *P. lutea*: stem simple or branched; lower leaves spatulate; upper ones lanceolate; spike subcapitate, obtuse; calycine wings ovate, mucronate; bracts shorter than the flowers.

HAB. Swamps in pine barrens. June—Oct. ♂. Fl. deep yell.; heads oblong.

6. *P. purpurea*: stem fastigiately branched; leaves alternate, oblong-linear; spikes cylindrical-oblong; flowers beardless; calycine wings cordate-ovate, twice as long as the capsule.

HAB. Wet pine barrens. July—Aug. ☉. Stem 12—18 in. high; fl. subimbric., rose-col.

7. *P. sanguinea*: stem fastigiately branched; leaves alternate, narrow-linear; spikes oblong; flowers

beardless ; calycine wings obovate, as long as the capsule.

HAB. Wet meadows. July—Oct. ☉. Stem 8—12 in. high ; fl. loose, dark rose-col.

3. *P. verticillata* : leaves verticillate, linear, whorls remote ; racemes spiked, acute, pedunculate ; flowers cristate ; calycine wings roundish ; stem erect, branched.

HAB. Dry hills. July—Oct. ☉. Stem very slender, quadrang. ; fl. small, greenish-wh.

9. *P. ambigua* : leaves linear ; the lowest ones verticillate ; the rest scattered ; spikes acute on very long peduncles ; flowers cristate ; calycine wings round and veined, as long as the fruit ; stem erect, virgately branched.

HAB. Wet woods. ☉. Fl. purplish, distinctly pedicellate.

10. *P. fastigiata* : stem slender, fastigiate ; leaves alternate, linear, acute ; spikes subcapitate, pedunculate ; flowers subcristate ; calycine wings spreading, ovate, acute, scarcely larger than the capsule.

HAB. New-Jersey. ☉.

11. *P. cruciata* : stem fastigiate, winged at the angles ; leaves verticillate in fours, linear-oblong, punctate ; spikes dense, sessile ; flowers subcristate ; calycine wings cordate, cuspidate.

HAB. Open swamps. Aug.—Sept. ☉. Stem often spreading ; fl. greenish-purp.

12. *P. brevifolia* : stem erect, subfastigiate, winged at the angles ; leaves verticillate in fours, oblong-linear, short, sprinkled with resinous dots ; spikes pedunculate, partly capitate ; flowers subcristate ; calycine wings cordate-ovate, acute, scarcely longer than the capsule.

HAB. Sandy swamps. July—Aug. ☉. Slender ; branch. erect ; fl. red.

13. *P. corymbosa* : stem simple, angular, corymbose at the summit, many-headed ; radical leaves spatulate-obovate ; cauline subequal, linear ; calycine wings oblong, cuspidate.

HAB. Sphagnous swamps. July—Aug. Stem 12 in. high ; fl. yell., dark green when dry.

DECANDRIA.

437. AMORPHA. Bastard indigo. *Leguminosæ*.

A. fruticosa β . *emarginata*: smooth, subarborescent; leaves petiolate, emarginate; spikes aggregated, long; calyx hoary, pedicellate, one of the teeth acuminate, the rest obtuse; legume few-seeded.

HAB. New-Jersey? *A shrub with spikes of purp. flowers.*

438. LUPINUS. Lupine. *Leguminosæ*.

L. perennis: perennial; root creeping; stem and leaves smoothish; leaves digitate; leaflets 8—9, obcuneate, lanceolate, obtuse; flowers alternate; calyx without appendages; upper lip emarginate; the lower entire.

HAB. Sandy woods and hills. May—June. *Stem ascend., 12 in. high; leav. digit.; fl. blue.*

439. CROTALARIA. Rattle-box. *Leguminosæ*.

1. *C. sagittalis*: hairy, erect, branching; leaves simple, ovate-lanceolate; stipules lanceolate, acuminate, decurrent; racemes opposite the leaves, about 3-flowered; corolla smaller than the calyx.

HAB. Sandy fields and woods. July—Aug. ☉. *Stem 12 in. high; fl. yell.; legum. infl., black.*

2. *C. parviflora*: hairy, erect, branched; leaves simple, linear-lanceolate; upper stipules decurrent, with 2 very short teeth; racemes opposite the leaves; corolla smaller than the calyx.

HAB. Sandy fields. June—July. ☉. *Leaves 2—3 in. long; fl. yell.*

440. GENISTA. Broom. *Leguminosæ*.

G. tinctoria; leaves lanceolate, smooth; branches terete, striate, erect, unarmed; flowers in a leafy raceme; legume smooth.

HAB. Dry hills. July. *Suffruticose, 1 ft. high; branches num.; fl. yell., subsess. ♂.*

441. PISUM. Pea. *Leguminosæ*.

P. maritimum: stem quadrangular, compressed; petioles flat above; stipules sagittate; leaflets numerous, subalternate, obovate; peduncles longer than the leaves, many-flowered.

HAB. Sandy shores. May—July: 4. Plant pale green; stem decumb.; fl. blue; leg. hairy.

442. LATHYRUS. Vetchling. *Leguminosæ*.

1. *L. palustris*: stem quadrangular, winged; stipules semisagittate, large, ovate, mucronate; leaflets in 3 pairs, oblong-ovate, mucronate; peduncles 4—6-flowered, rather longer than the leaves.

HAB. Wet thickets. June—July. 4. Stem weak; leav. broad, or narrow-ovate; fl. purp.

2. *L. myrtifolius*: stem naked, quadrangular; stipules semisagittate, lanceolate, acuminate; leaflets 4, oblong-lanceolate, acute, mucronate, reticulately veined; peduncles longer than the leaves, about 3-flowered.

HAB. Salt marshes. July—Aug. 4. Fl. purp. and rose-coloured.

3. *L. venosus*: stem naked, quadrangular; stipules semisagittate, ovate, acuminate; leaflets numerous, (about 5 pairs,) subalternate, ovate, obtuse, mucronate, veined; peduncles shorter than the leaves; 5—10-flowered.

HAB. Mountains. July. 4. Leaflets large; fl. purp.

443. VICIA. Vetch. *Leguminosæ*.

1. *V. sativa*: flowers mostly by pairs, sessile; legumes erect; lower leaves retuse; stipules toothed, or laciniate, with a dark spot beneath.

HAB. Rocky shores. June. ☉. Stem 1—2 ft. long; leav. pubes. or smooth; fl. sm., blue.

2. *V. americana*: peduncles 4—10-flowered, shorter than the leaves; stipules semisagittate, dentate; leaflets 8—12, elliptical-lanceolate, obtuse, smooth.

HAB. Shady thickets. June. 4. Stem long; leav. distant; fl. large, purp.

3. *V. Cracca*: spikes many-flowered, retrorsely imbricate, longer than the leaves; leaflets lanceolate, pubescent; stipules semisagittate, mostly entire.

HAB. Meadows and thickets. Aug. 4. Stem subpubes.; leav. pinnate; fl. sm., purp.

4. *V. caroliniana*: peduncles many-flowered, as long as or longer than the leaves; flowers distant; stipules ovate-lanceolate, entire; leaflets 8—10, elliptical-lanceolate, rather smooth.

HAB. Rocky hills. May—June. 4. Stem long, climb.; fl. small, num., white.

444. ERVUM. Tare. *Leguminosæ*.

1. *E. hirsutum*: peduncles many-flowered; legumes hairy, 2-seeded; leaflets linear-oblong, truncate.

HAB. Rocky places, near salt water. May—June. ☉. Fl. minute, blue.

2. *E. tetraspermum*: peduncles mostly 2-flowered; legume smooth, 4—5-seeded; leaves oblong, truncate.

HAB. With the preceding. May—June. ☉. Stem very slend.; fl. minute, blue.

445. ASTRAGALUS. Milk-vetch. *Leguminosæ*.

1. *A. carolinianus*: caulescent, erect; leaflets (41) oblong, pubescent beneath; spikes pedunculate; bracts lanceolate, as long as the peduncles; legumes ovate, tumid, rostrate.

HAB. Mountains. June—July. 4. Spikes dense; fl. num., pale yellow.

2. *A. canadensis*: caulescent, diffuse; leaflets (21) smooth on both sides; legume subcylindrical, mucronate.

HAB. Barren fields. June. 4. Stem 2 ft. high; legume ovate, tumid?; fl. yell.

446. MELILOTUS. Melilot. *Leguminosæ*.

M. officinalis: legumes naked, 2-seeded, rugose; leaflets ovate-oblong, dentate; stem erect.

HAB. Wet meadows. Aug. ☉. ♂. Stem 2—3 ft. high; fl. yell. in long racem.—Plant odor. ♂.

447. TRIFOLIUM. Trefoil. *Leguminosæ*.

* *Legumes 3—8-seeded.*

1. *T. repens*: heads umbellate; legumes 4-seeded, covered by the persistent corolla; stem creeping.

HAB. Meadows, &c. May—Oct. 4. Stem 6—12 in. long; pet. very long; fl. wh.

2. *T. reflexum*: decumbent, pubescent; leaflets obovate; stipules obliquely cordate; heads many-flowered; flowers pedicellate, all at length reflexed; legumes mostly 4-seeded.

HAB. Rocky upland. June. 4. Very pubes.; fl. in large heads, red.

** *Legume 1-seeded.*

† *Vexillum deciduous*; (Flowers not yellow.)

3. *T. pratense*: heads dense, ovate; lower tooth of the calyx shorter than the tube of the monopetalous corolla; leaflets oval, entire; stem ascending.

HAB. Meadows, &c. May—Oct. 4. Stem 1—2 ft. high; fl. red, frag. §.

4. *T. pennsylvanicum*: ascending; stem much branched; flexuous; leaflets ovate-elliptical, obtuse, very entire; stipules awned; spikes ovate-cylindrical, solitary, dense; lower tooth of the calyx shorter than the monopetalous corolla.

HAB. Woods and fields. June—Sept. 4. Fl. red.

5. *T. arvense*: heads very hairy, oblong-cylindrical; teeth of the calyx setaceous, longer than the corolla; leaflets villous, narrow-obovate.

HAB. Dry fields. June—Sept. ☉. Stem 6—12 in. high; fl. minute, wh. or pink.

†† *Vexillum persistent, scarious.* (Flowers yellow.)

6. *T. procumbens*: heads oval, densely imbricate; vexillum sulcate, reflexed; stem procumbent; middle leaflet petiolate.

HAB. Sandy soils. June. ☉. Stem 2—3 in. long; leaf. obovate; fl. brown when old.

7. *T. agrarium*: erect, subpubescent; leaflets lanceolate-cuneate, obtuse; intermediate one sessile; stipules lanceolate, acute; heads oval, imbricate; vexillum deflexed, persistent; teeth of the calyx subulate, smooth, unequal.

HAB. Sandy soils. June. ☉. Stem 1 ft. high; fl. small.

8. *T. campestre*: spike ovate, imbricate; vexillum deflexed, persistent; leaflets lanceolate-ovate, middle one petiolate; stem sub-diffuse; branches decumbent.

HAB. Sandy soils. June. ☉.

448. STYLOSANTHES. *Leguminosæ*.

- S. elatior*: stem erect, pubescent on one side; leaflets lanceolate, smooth, acute; bracts lanceolate, ciliate, 3—4-flowered; loment indurated, 1-seeded.

HAB. Sandy woods. July—Aug. ♀. Stem 12 in. high, branch.; bracts hisp.; fl. yell.

449. LESPEDEZA. Bush-clover. *Leguminosæ*.

1. *L. frutescens*: stem erect; leaflets elliptical, obtuse, silky-pubescent; flowers in subcapitate fascicles, shorter than the leaves, conglomerate towards the summit of the stem; loment hairy, shorter than the villous calyx.

HAB. Dry woods. Sept. ♀. Stem 2—3 ft. high, hairy; petiol. short; cor. wh. and red.

2. *L. angustifolia*: stem erect; leaflets linear-lanceolate, hoary, pubescent; racemes capitate, longer than the leaves; corolla longer than the calyx.

HAB. Sandy woods. Sept. ♀. Stem 2—3 ft. high; leav. 2—3 lin. broad; heads sm.; fl. wh.

3. *L. Stuevei*: stem erect, simple, silky-villous; leaflets elliptic-oval; racemes pedunculate scarcely longer than the leaves, loose; loment naked, pubescent.

HAB. Sandy fields. ♀. Stem 2—3 ft. high, pubes. soft; pedunc. 1 in. long; cor. purp.

4. *L. hirta*: erect, branched, very villous; leaflets roundish; racemes capitate, axillary, on peduncles longer than the leaves; corolla and laments as long as the calyx.

HAB. Dry woods. Aug.—Sept. 4. Stem 2—4 ft. high; racem. ovate, dense; fl. reddish-wh.

5. *L. sessiliflora*: erect, somewhat branched; leaflets oblong-oval, obtuse; fascicles of flowers subsessile; axillary ones partly racemose; loment naked, acute.

HAB. Dry woods. Aug.—Sept. 4. Stem 2 ft. high, slend.; pet. long; fl. violet.

6. *L. reticulata*: stem erect, simple or branched, nearly smooth; leaflets oblong-linear, hairy beneath; fascicles of flowers subsessile, numerous; axillary ones sub-racemose; loment ovate, reticulate, acute.

HAB. Dry woods. Aug. 4. Stem 2 ft. high, slend.; leaves 2-lin. broad; fl. violet.

7. *L. violacea*: diffuse, much branched; leaves on long petioles; leaflets oval-elliptic, obtuse, substrigose beneath; racemes setaceous, longer than the petioles, sub-umbellate; flowers by pairs, distinctly pedicellate; laments rhomboidal, reticulate, and smooth.

HAB. Dry woods. Aug. 4. Stems long, slend., nearly procumb.; fl. violet.

8. *L. procumbens*: slender, procumbent, every where pubescent; leaflets oval; peduncles very long, setaceous; racemes short; laments suborbicular; pubescent.

HAB. Sandy fields and woods. Aug.—Sept. 4. Stems 2—3 ft. long; fl. purp.

9. *L. prostrata*: smooth, prostrate; leaves on very short petioles; leaflets obovate-elliptic, obtuse; racemes axillary and terminal, subpaniculate; peduncles very long; laments oval, subpubescent.

HAB. Sandy soils. Aug. 4. Stem very slend., branch.; fl. violet.

450. HEDYSARUM. Sainfoin. Leguminosæ.

1. *H. canadense*: leaves ternate, oblong-lanceolate;

stipules filiform ; flowers racemed ; joints of the loment obtusely triangular, hispid.

HAB. Woods. July. 4. *Stem 3 ft. high ; leav. 3 in. long ; fl. purp. ; bract. long.*

2. *H. canescens* : erect, hairy ; stem with ciliate angles, hispid ; leaves ternate, roundish, with appressed hairs beneath ; stipules ovate, acuminate ; racemes paniculate ; bracts cordate ; joints of the loment triangular, hispid.

HAB. Dry barren woods. June—Aug. 4. *Fl. pale purp.*

3. *H. marilandicum* : erect, branched, hairy ; leaves ternate, oblong, subvillous beneath ; stipules subulate ; racemes paniculate ; loment 3-jointed ; joints rhomboidal, reticulate, a little hairy.

HAB. Dry woods. July—Aug. 4. *Stem hairy above ; petiole long ; pan. loose.*

4. *H. ciliare* : erect, somewhat hairy ; leaves ternate, approximate, on very short petioles ; leaflets small, oval, obtuse ; stipules subulate ; panicle terminal ; joints of the loment (2—3) semiorbicular, hispid.

HAB. Dry swamps. Aug. 4. *Stem 2 ft. high, slender ; leav. small, numerous.*

5. *H. obtusum* : stem erect, very slender, smoothish ; leaves ternate, ovate, obtuse, subcordate at the base ; stipules subulate ; panicle terminal ; joints of the loment semiorbicular, reticulate, hispid.

HAB. Woods. Aug. 4. *Stem 2 ft. high, branch. ; leav. 1 in. long ; lom. 3-joint.*

6. *H. viridiflorum* : stem erect, branched, scabrous ; leaves ternate, ovate, obtuse, scabrous above, villous and very soft beneath ; panicle terminal, very long, naked ; joints of the loment triangular.

HAB. Woods. Aug. 4. *Stem 3 ft. high, pubes. ; fl. greenish externally.*

7. *H. humifusum* : stem prostrate, smooth ; leaves ternate ; leaflets ternate, slightly hairy ; racemes elongated ; joints of the loment subrhomboidal.

HAB. Woods. Aug. 4. *Leav. subacute ; pan. loose ; joints 4—5, hisp.*

8. *H. rotundifolium* : stem prostrate, hairy ; leaves ternate, suborbicular, hairy ; stipules cordate,

reflexed ; racemes axillary, paniculate ; joints of the loment subrhomboidal.

HAB. Rocky woods. Aug. 4. Stem 2—3 ft. long ; leav. large ; racem. few-fl.

9. *H. paniculatum* : erect, smooth ; leaves ternate, oblong-lanceolate, or elliptical, smooth ; stipules subulate ; joints of the loment (4—5) rhomboidal.

HAB. Woods. Aug. 4. Stem 3 ft. high, slender, striate ; leav. long ; loment large.

10. *H. strictum* : erect, subpubescent ; leaves ternate ; leaflets sublinear, smooth, reticulate ; stipules subulate ; racemes axillary and terminal ; loment mostly 2-jointed ; joints lunate-triangular, hispid.

HAB. Pine barrens. Aug. 4. Stem slender, branch. ; leav. 2—3 lin. broad.

11. *H. laevigatum* : very smooth ; stem erect, or subdecumbent ; leaves ternate, on long petioles, ovate, acute, subcoriaceous, somewhat glaucous ; panicle terminal ; bracts ovate, acute, shorter than the flower buds ; joints of the loment triangular.

HAB. Woods. Aug. 4. Petiol. long ; leav. large ; loment 3—5-joint, hisp.

12. *H. nudiflorum* : leaves ternate, broad oval, acuminate, slightly glaucous beneath ; scape panicled, smooth, radical ; joints of the loment obtusely triangular.

HAB. Woods. Aug. 4. Stem 8—10 in. high ; pet. long ; scape 2—3 ft. long, slender.

13. *H. acuminatum* : erect, simple, pubescent ; leaves ternate, ovate, conspicuously acuminate, a little hairy ; panicle terminal, on a very long naked peduncle ; joints of the loment roundish.

HAB. Woods. July—Aug. 4. Stem 8—12 in. high ; pan. 1—2 ft. long.

14. *H. cuspidatum* : erect, smooth ; leaves ternate, ovate, conspicuously acuminate ; stipules lanceolate ; panicle terminal ; bracts large, ovate, acuminate ; joints of the loment subtriangular.

HAB. Woods. Aug. 4. Stem 3—5 ft. high ; leaves and fl. large ; loment 3—6 jointed.

15. *H. alpinum* β : erect ; leaves pinnate ; leaflets

oval-oblong, hairy ; stipules partly sheathing ; joints nearly round, smooth.

HAB. Mountains. 4. *Fl. purp.*

451. *ÆSCHYNOMENE*. *Leguminosæ*.

Æ. hispida : stem erect, and with the petioles, peduncles, and lomentis hispid ; leaves in many pairs ; leaflets linear, obtuse ; racemes simple, few-flowered.

HAB. River marshes. Aug. ☉. Stem 2—3 ft. high ; leaf. very num. ; fl. yell. and red.

452. *PHASEOLUS*. Kidney-bean. *Leguminosæ*.

P. perennis : twining, pubescent ; racemes paniculate, mostly by pairs ; leaflets ovate, acuminate, triply nerved ; legumes pendulous.

HAB. Dry woods. July. 4. Stem long ; pan. 6—12 in. long ; leg. broad-falcate.

453. *STROPHOSTYLES*. *Leguminosæ*.

1. *S. angulosa* : leaves ternate ; leaflets angular, 2—3-lobed ; flowers capitate, on peduncles longer than the leaves.

HAB. Rocky banks. Aug. ☉. Stem prostrate, somewhat hairy ; lower leaves entire.

2. *S. helvolus* : climbing or prostrate ; leaves ternate ; leaflets oblong-ovate ; flowers capitate, on very long peduncles.

HAB. Sandy fields. July—Aug. 4. Stem branch. ; pedunc. 6—8 in. long.

454. *APIOS*. *Leguminosæ*.

A. tuberosa.

HAB. Shady thickets. July—Aug. 4. Root tub. ; stem twining ; leaves pinnate ; leaf. 5—7 ; racem. axill. ; fl. dark purp.

455. *AMPHICARPA*. *Leguminosæ*.

A. monoica : leaves ternate, ovate, smooth ; stem hairy ; racemes of the stem pendulous, petaliferous, ste-

rile ; radical peduncles, bearing apetalous fertile flowers.

HAB. Woods and thickets. July—Aug. 4. *Stem twin., slend. ; fl. racem., pale purp.*

456. GALACTIA. *Leguminosæ.*

1. *G. glabella* : leaves ternate, ovate, and elliptic, subcoriaceous, shining, emarginate at each end, smooth above ; racemes pedunculate, as long as the leaves ; calyx smooth ; legumes pubescent.

HAB. Pine barrens. Aug. 4. *Stem prost. ; fl. reddish-purp., large.*

2. *G. mollis* : plant villous-hoary ; leaves ternate, oval or elliptic, pale beneath ; racemes axillary, simple, elongated, few-flowered ; legumes villous.

HAB. Pine barrens. July—Aug. 4. *Fl. purp., with yell. and white.*

457. CLITORIA. *Leguminosæ.*

1. *C. mariana* : leaves ternate, ovate, acute, pale beneath ; calyx tubular-campanulate, 5-cleft, much longer than the linear bracts ; legume torulose.

HAB. Shady river-banks. Aug. 4. *Erect or twin. ; fl. large, pale blue.*

2. *C. virginiana* : leaves ternate, ovate ; calyx 5-parted, scarcely as long as the bracts ; segments subulate, diverging ; legumes subensiform.

HAB. Hedges. Aug. 4. *Stem twining ; fl. very large, pale violet.*

458. ROBINIA. Locust. *Leguminosæ.*

- R. *Pseudacacia* : leaves pinnate, with an odd leaflet ; stipules prickly ; racemes pendulous ; teeth of the calyx unarmed ; legumes smooth.

HAB. About plantations. May. *A large tree ; fl. large, wh. in long racem.*

459. TEPHIROSIA. *Leguminosæ.*

- T. *virginica* : erect, villous ; leaflets numerous, oblong-lanceolate, acuminate ; raceme terminal, subsessile ; legumes falcate, villous.

HAB. Dry woods. July. 4. Stem 12 in. high ;
leav. pale gr. ; fl. wh. and purp.

460. MEDICAGO. None such. Leguminosæ.

M. *lupulina*: spikes ovate ; legumes reniform, 1-seeded, veined and rugose ; stems procumbent.

HAB. Fields, &c. May—Oct. ☉. Stems diffuse ;
spikes small, yell.

SYNGENESIA.

ÆQUALIS.

* *Florets all ligulate.*

461. CICHORIUM. Cal. surrounded with leafy scales. Recept. somewhat chaffy. Pappus plumose, sessile, unequal.

462. APARGIA. Cal. imbricate. Recept. naked, punctate. Pappus plumose, sessile, unequal.

463. LEONTODON. Cal. imbricate, with flaccid scales. Recept. naked. Pappus simple, stipitate.

464. PRENANTHES. Cal. surrounded with leafy scales. Florets few, (5—20.) Recept. naked. Pappus simple, subsessile.

465. LACTUCA. Cal. imbricate, cylindrical ; scales membranaceous at the margin. Recept. naked. Pappus simple, stipitate.

466. SONCHUS. Cal. imbricate, swelling at the base. Recept. naked. Pappus simple, sessile.

467. HIERACIUM. Cal. imbricate, ovate. Recept. nearly punctate. Pappus simple, sessile.

468. KRIGIA. Cal. many-leaved, simple. Recept. naked. Pappus double ; exterior 5—8-leaved ; interior of 5, 8, or 24 scabrous bristles.

** *Florets all tubular, forming a hemispherical head.*

469. ARCTIUM. Cal. globose, with the scales hooked at their extremity. Recept. chaffy. Pappus setaceous-chaffy.

470. ONOPORDON. Cal. ventricose, imbricate with

spreading spinous scales. *Recept.* pitted. *Pappus* capillary, deciduous, scabrous.

471. CNICUS. *Cal.* ventricose, imbricate with spinous scales. *Recept.* hairy. *Pappus* deciduous, plumose.
472. LIATRIS. *Cal.* oblong, imbricate. *Recept.* naked. *Pappus* plumose, persistent, (mostly coloured.) *Seed* pubescent, striate, obconic.
473. VERNONIA. *Cal.* ovate, imbricate. *Stig.* bifid. *Pappus* double; exterior short and chaffy; interior capillary.

* * * *Florets all tubular, erect, forming a nearly level top.*

474. KUHNIA. *Cal.* imbricate, cylindric. *Recept.* naked. *Pappus* plumose, sessile. *Seed* pubescent with numerous striæ.
475. EUPATORIUM. *Cal.* imbricate, oblong. *Style* much exsert, deeply cleft. *Recept.* naked. *Pappus* scabrous. *Seed* 5-striate, or angular.
476. MIKANIA. *Cal.* 4—6-leaved, 4—6-flowered. *Recept.* naked. *Pappus* hairy.
477. CHRYSOCOMA. *Cal.* imbricate, oblong or hemispherical. *Style* scarcely exserted. *Recept.* naked. *Pappus* hairy, scabrous. *Seed* pubescent.
478. CACALIA. *Cal.* cylindric, scaly at the base. *Recept.* naked. *Pappus* hairy.
479. SPARGANOPHORUS. *Cal.* subglobose, imbricate; scales recurved at the point. *Recept.* naked. *Seed* crowned with a cartilaginous shining cup.

SUPERFLUA.

* *Florets of the ray obsolete.*

480. TANACETUM. *Cal.* imbricate, hemispherical; scales acuminate. Rays of the corolla obsolete, trifid. *Recept.* naked. *Pappus* somewhat margined.
481. ARTEMISIA. *Cal.* ovate, imbricate; scales rounded, connivent. *Florets* of the ray subulate. *Recept.* subvillous or naked. *Pappus* 0

482. BACCHARIS. *Cal.* imbricate, cylindric ; scales ovate, subcoriaceous. Fertile *florets* mixed with the perfect. *Recept.* naked. *Pappus* hairy.

483. CONYZA. *Cal.* imbricate ; scales often subscariosus. *Recept.* naked. Marginal *florets* fertile, 3-cleft. *Pappus* simple and capillary.

484. GNAPHALIUM. *Cal.* imbricate ; scales scariosus, mostly coloured. *Recept.* naked. *Florets* of the ray subulate ; fertile *florets* entire. *Pappus* scabrous.

* * *Florets of the ray ligulate.*

485. ERIGERON. *Cal.* imbricate, subhemispherical. *Florets* of the ray very numerous and narrow. *Recept.* naked. *Pappus* double ; exterior minute ; interior hairy, of few rays.

486. INULA. *Cal.* imbricate. *Florets* of the ray numerous, (yellow.) *Recept.* naked. *Pappus* simple, scabrous ; (sometimes with a minute exterior chaffy pappus.)

487. ASTER. *Cal.* imbricate, with the lower scales often spreading. *Florets* of the ray generally more than 10, rarely fewer, (not yellow.) *Recept.* naked. *Pappus* simple.

488. SOLIDAGO. *Cal.* imbricate, scales connivent. *Florets* of the ray about 5, (yellow.) *Recept.* naked. *Pappus* simple, scabrous.

489. ARNICA. *Cal.* hemispherical ; leaflets equal, longer than the disk. *Recept.* naked. *Pappus* simple, hairy. *Florets* of the ray (yellow) often destitute of anthers.

490. SENECIO. *Cal.* subcylindric, equal, scaly at the base ; scales withered at the points. *Recept.* naked. *Pappus* simple. (Rays sometimes wanting.)

491. TUSSILAGO. *Cal.* simple, equal, membranaceous, swelling. *Recept.* naked. *Pappus* simple, sessile. (Flowers mostly discous.)

492. BOLTONIA. *Cal.* imbricate. *Rays* numerous. *Recept.* conic, punctate. *Seeds* flat and submarginate. *Pappus* consisting of many minute

bristles, with 2 of them opposite, and mostly elongated.

493. **CHRYSANTHEMUM.** *Cal.* hemispherical, imbricate; scales with membranaceous margins. *Recept.* naked. *Pappus* 0.
494. **VERBESINA.** *Cal.* many-leaved; leaflets disposed in a double series. *Rays* about 5. *Recept.* chaffy. *Pappus* 2-awned.
495. **ANTHEMIS.** *Cal.* hemispherical; scales nearly equal, with scarious margins. *Recept.* convex, with flat rigid chaff. *Seed* crowned with a membranaceous border.
496. **ACHILLEA.** *Cal.* ovate, imbricate, unequal. *Rays* 5—10, roundish-obcordate. *Seeds* without pappus or border.
497. **HELIOPSIS.** *Cal.* imbricate; scales subovate, lined. *Rays* large and linear. *Recept.* chaffy, conic; chaff lanceolate. *Seed* quadrangular. *Pappus* 0.
498. **HELENIUM.** *Cal.* simple, many-parted. *Rays* 3-cleft. *Recept.* naked, globose, chaffy on the margin. *Seed* villous. *Pappus* of 5-awned scales.

FRUSTRANEA.

499. **HELIANTHUS.** *Cal.* imbricate, subsquarrose, leafy. *Recept.* chaffy, flat. *Pappus* chaffy, 2-leaved, caducous.
500. **RUDBECKIA.** *Cal.* subequal, mostly double. *Recept.* conic, chaffy. *Pappus* a 4-toothed margin.
501. **BIDENS.** *Cal.* subequal, leafy or scaly at the base. *Rays* often wanting. *Recept.* chaffy, flat. *Pappus* consisting of 2—4 retrorsely scabrous awns. *Seed* quadrangular.
502. **COREOPSIS.** *Cal.* double; each many-leaved; the interior equal, subcoriaceous and coloured. *Recept.* chaffy; scales flat. *Seed* compressed, emarginate, bidentate.
503. **ACTINOMERIS.** *Cal.* simple, many-leaved, foliaceous, subequal. *Rays* remote, elongated, (4—8.) *Recept.* small and chaffy; the leaflets

embracing the margin of the seed. *Seed* compressed, margined, crowned with 2 persistent awns.

NECESSARIA.

504. SILPHIUM. *Cal.* squarrose ; scales broad and leafy. *Recept.* chaffy. *Seed* flat, obcordate, emarginate, bidentate.
505. POLYMNIA. *Cal.* double ; exterior 4—5-leaved ; interior 10-leaved ; leaflets concave. *Recept.* chaffy. *Pappus* 0.
506. IVA. *Cal.* about 5-leaved, or 5-parted. *Florets* of the ray 5. *Recept.* hairy. *Seed* obovate, naked.

SEGREGATA.

507. ELEPHANTOPUS. *Partial Cal.* 4-flowered. *Florets* 5-cleft, ligulate, perfect. *Recept.* naked. *Pappus* setaceous.

SYNGENESIA.

ÆQUALIS.

461. CICHORIUM. Succory. *Compositæ.*

C. Intybus : flowers axillary, sessile, in pairs ; leaves runcinate.

HAB. Fields. July—Sept. 4. *Stem* 2—3 ft. high, branch., rough ; *fl.* large, bl. ♂.

462. APARGIA. *Compositæ.*

A. autumnalis : scape branching ; peduncles squamose ; leaves lanceolate, dentate or pinnatifid, smoothish ; calyx elongated.

HAB. Fields, &c. June—Nov. 4. *Leav.* rad. ; *scape* spread., assurg. ; *fl.* yell. ♂.

463. LEONTODON. Dandelion. *Compositæ*.

1. *Taraxacum* : exterior scales of the calyx reflexed ; leaves runcinate, smooth, dentate.

HAB. Pastures, &c. April—Nov. 4. *Smooth ; leav. rad. ; fl. large, yell.*

464. PRENANTHES. *Compositæ*.

1. *P. alba* : radical leaves angular-hastate, somewhat lobed ; stem-leaves roundish-ovate, dentate, petio- late ; racemes paniced, nodding ; calyx 8-cleft, 9—12-flowered.

HAB. Low woods. Aug.—Sept. 4. *Stem 2—3 ft. high ; fl. white or purp.*

- a. serpentaria* : radical leaves palmate-sinuate ; those of the stem on long petioles, with the middle segment 3-parted.

HAB. Mountains. Aug.—Sept. *Fl. purp.*

- g. nana* : stem low ; lower leaves 3-parted ; middle ones hastate ; upper ones ovate or lanceolate ; sometimes all are entire.

HAB. High mountains. Aug. *Stem 4—15 in. high ; fl. purp., often erect.*

2. *P. altissima* : stem branched ; leaves 3-lobed, petio- late, angular, denticulate, scabrous on the margin ; racemes axillary ; flowers nodding ; calyx about 5-flowered.

HAB. Woods. Aug. 4. *Stem 3—5 ft. high ; fl. yellowish.*

3. *P. cordata* : stem paniculate above ; leaves petio- late, cordate, denticulate, ciliate ; the uppermost ones sessile, oblong, entire ; flowers racemose, in a loose panicle, nodding ; calyx 6-cleft, 6-flowered.

HAB. Rocky woods. Aug. 4. *Stem 3—4 ft. high ; fl. yellowish.*

4. *P. virgata* : smooth ; stem simple ; leaves all lyrate- sinuate ; flowers subsecund, pendulous ; calyx smooth, 8-cleft, 10-flowered.

HAB. River banks. Sept. 4. *Stem 2—4 ft. high, slend. ; fl. purp.*

5. *P. racemosa* : stem simple ; leaves all undivided, smoothish ; radical ones oval-lanceolate, denticu-

late ; radical ones closely sessile ; raceme oblong ; flowers in nodding fascicles ; calyx very hairy, 8—9-parted, 9—12-flowered.

HAB. Swamps. Aug.—Sept. 4. Stem 2 ft. high ; fl. purp.

465. LACTUCA. Lettuce. *Compositæ*.

1. *L. elongata* : leaves smooth ; the lower ones runcinate, amplexicaul ; upper ones lanceolate, sessile ; flowers paniculate.

HAB. Wet woods. 4. ♂. July—Aug. Stem 4—6 ft. high ; pan. large, loose ; fl. yell.

2. *L. hirsuta* : lower part of the stem and leaves hairy ; radical leaves lyrate ; segments truncate, subdentate ; upper ones partly runcinate-pinnatifid ; flowers in racemes.

HAB. Pennsylvania. Aug. 4. Fl. yell. and purp.

3. *L. integrifolia* : leaves sagittate, entire, unarmed, amplexicaul ; flowers panicled.

HAB. Road sides. July. ♂. Stem 3—4 ft. high, smooth ; fl. yell.

4. *L. sanguinea* : leaves amplexicaul, runcinate, glaucous beneath ; with the midrib filamentous ; flowers panicled.

HAB. Woods. July—Aug. ♂? Stem 2—3 ft. high, purp. ; cal. purp. ; fl. crim.

466. SONCHUS. Sow-thistle. *Compositæ*.

1. *S. oleraceus* : peduncles tomentose ; calyx smooth ; leaves runcinate, dentate.

HAB. Waste places. July—Sept. ☉. Stem 2—3 ft. high, hollow ; fl. yell. ♂.

2. *S. arvensis* : peduncles and calyx hispid, subumbellate ; leaves runcinate, denticulate, cordate at the base ; root creeping.

HAB. Banks of rivers. 4. Stem 2 ft. high ; glandular-hairy ; fl. large, yell. ♂.

3. *S. leucophæus* : peduncles squamose ; flowers racemose ; leaves runcinate, acuminate ; stem virgate and panicled.

HAB. Swamps. Sept. 4. ♂. Stem 2 ft. high ; fl. yellowish.

4. *S. acuminatus*: peduncles subsquamose; flowers paniculate; radical leaves subruncinate; cauline ones ovate, acuminate, petiolate, denticulate in the middle.

HAB. Woods. Aug. ♂. Stem 4—5 ft. high; fl. small, blue.

5. *S. pallidus*: raceme compound, terminal; leaves lanceolate-ensiform, amplexicaul, dentate.

HAB. Fields. July. ♀. Stem 2—3 ft. high; fl. small, yell.

6. *S. floridanus*: peduncles subsquamose; flowers paniculate; leaves lyrate-runcinate, minutely dentate, petiolate.

HAB. Road sides. Aug. ♂. Stem 3—5 ft. high; pan. long; fl. sm., blue.

7. *S. macrophyllus*: peduncles hairy, naked; flowers paniculate; leaves lyrate; cordate at the base, hairy beneath.

HAB. Low grounds. Aug.—Sept. ♀. Stem 4—7 ft. high; fl. large, blue.

8. *S. spinulosus*: leaves amplexicaul, oblong, undulate, spinulose; flowers somewhat umbelled.

HAB. Salt marshes. Aug. ☉. Stem 2 ft. high; pedun. smooth, or subpilose; fl. yell.

467. HIERACIUM. Hawk-weed. *Compositæ*.

1. *H. venosum*: scape naked, paniculate, smooth; leaves obovate-lanceolate a little hairy above, naked beneath, ciliate; the veins coloured; calyx smooth.

HAB. Woods. July—Aug. ♀. Scape 1—2 ft. high; leav. rad.; fl. yell.

2. *H. Gronovii*: scape leafy, paniculate; calyx glandular-hairy; leaves obovate, obtuse, entire, strigose; midrib beneath very villous.

HAB. Dry hills. Aug.—Sept. ♀. Stem 2 ft. high, nearly naked; pedicels gland.

3. *H. paniculatum*: smoothish; stem erect, leafy, whitish tomentose; pedicels capillary; leaves lanceolate, naked, dentate, membranaceous.

HAB. Woods. Aug.—Sept. ♀. Stem 1 ft. high; leav. smooth; pedicels long.

4. *H. Kalmii*: stem erect, subvillose; leaves sessile, lanceolate, acuminate, acutely and divaricately dentate; panicle subcorymbose; pedicels tomentose.

HAB. Rocky woods. Aug. 4. Stem 2 ft. high; pedicels thick.

5. *H. marianum*: stem erect, villous; leaves obovate or elliptic, strigose and hispid, villous on the midrib; the lower ones slightly dentate; pedicels and calyx tomentose.

HAB. Sandy hills. Aug.—Sept. Stem 2 ft. high. pan. dense; ped. gland.

468. KRIGIA. *Compositæ*.

1. *K. virginica*: glaucous; primary leaves roundish, entire; the rest lyrate, nearly smooth; scape 1-flowered, smooth, at length longer than the leaves; calyx smooth.

HAB. Sandy soils. May—July. ☉. Scape 1—6 in. high; fl. sm., orange.

2. *K. amplexicaulis*: glaucous; leaves oblong-ovate; radical ones subdentate, spatulate; scape somewhat leafy, often bifid; branches 2—3-flowered; pappus with many bristles.

HAB. Woods. June. 4. Stem 1 ft. high; pedunc. elong.; fl. large, orange.

469. ARCTIUM. Burdock. *Compositæ*.

A. Lappa: leaves cordate, petiolate, without prickles.

HAB. Road sides, &c. July—Dec. 4. Leaves large, spread.; fl. term., purp. ♂.

470. ONOPORDUM. Cotton Thistle. *Compositæ*.

O. Acanthium: scales of the calyx spreading, subulate; leaves ovate-oblong, decurrent, sinuate and spinous, woolly on both sides.

HAB. Waste places. July. ♂. Plant white and woolly; fl. large, solit., purp. ♂.

471. CNICUS. Thistle. *Compositæ*.* *Leaves decurrent.*

1. *C. lanceolatus*: leaves decurrent, pinnatifid, hispid; the segments divaricate and spinous; calyx ovate, tomentose; scales lanceolate, spreading.

HAB. Waste places. July—Sept. ♂. Stem 2—4 ft. high; leav. toment. beneath. §.

** *Leaves sessile.*

2. *C. altissimus*: leaves sessile, oblong-lanceolate, scabrous, tomentose beneath, dentate, ciliate; radical ones pinnatifid; calyx ovate, bracteate; scales ovate-lanceolate, spinous, appressed.

HAB. Old fields. June—Sept. ♀. Stem 3—8 ft. high; fl. subsolit., large, purp. or wh.

3. *C. arvensis*: leaves sessile; pinnatifid, spinous; stem paniculate; calyx ovate or globose; scales ovate-lanceolate, mucronate, appressed.

HAB. Road sides, &c. July. ♀. Root creep.; stem 2—3 ft. high; fl. sm., purp. §?

4. *C. horridulus*: leaves sessile, pinnatifid, acutely laciniate, very spinous, woolly beneath; involucre many-leaved, 1-flowered, scales acute.

HAB. Fields. June—Aug. ♂. Stem 1—2 ft. high; fl. axil. and term., large, yellowish.

5. *C. muticus*: leaves all pinnatifid, woolly beneath; segments spinulous, somewhat acute; branches naked, 1-flowered; calyx globose; scales unarmed.

HAB. Meadows. Aug.—Sept. ♂. Stem subsimp., 3—4 ft. high; cal. woolly.

6. *C. discolor*: leaves sessile, lanceolate, pinnatifid, smooth above, white and tomentose beneath; segments 2-lobed, spinous; calyx subglobose; scales appressed, with reflexed points.

HAB. Thickets. July—Sept. ♂. Stem 3—5 ft. high, much branch.; fl. red.-purp.

7. *C. virginianus*: stem simple, attenuated, mostly 1-flowered; leaves sessile, lanceolate, hoary and tomentose beneath, very smooth above, remotely dentate; teeth spinous; calyx ovate; scales appressed, with short points, carinate.

HAB. Woods. June. 4. Stem 3—5 ft. high, *slend.*; *cal. glutin.*; *fl. purp.*

3. *C. pumilus*: stem hairy; leaves amplexicaul, green on both sides, oblong-lanceolate, pinnatifid; segments irregularly lobed, ciliate and spinous; calyx subglobose, naked; scales appressed, spinous.

HAB. Sandy fields. Aug. ♂. Stem thick, 1 ft. high; *fl. few, large, purp.*

9. *C. glutinosus*: leaves pinnatifid, with divaricate segments; calyx ovate, with unarmed glutinous scales.

HAB. Damp soils. Aug.—Sept. ♂. Stem 4—6 ft. high; *fl. small, purp.*; *cal. webbed.*

472. LIATRIS. *Compositæ.*

1. *L. squarrosa*: stem simple, pubescent; leaves linear, very long; raceme few-flowered, leafy; calyx large, about 20-flowered; scales leafy, lanceolate, mucronate, rigid and spreading; segments of the florets linear, villous internally.

HAB. Dry woods. Sept. 4. Root tub.; stem 2—3 ft. high; *fl. few, very large.*

2. *L. scariosa*: stem erect, hairy; leaves lanceolate, pubescent, scabrous along the margin; raceme long; calyx 14-flowered; scales obovate, nearly smooth, with the margin scarious; the lower ones spreading.

HAB. Sandy hills and woods. Sept. 4. Stem 3—4 ft. high; *fl. num., large.*

3. *L. spicata*: leaves linear, entire, smooth, ciliate at the base, nerved and punctate; raceme spiked; scales of the calyx linear, obtuse.

HAB. Moist meadows. Aug. 4. Stem 3—5 ft. high, smooth; *cal. 8-fl.*

4. *L. pilosa*: stem simple, pubescent; leaves linear, hairy, ciliate; flowers racemose, loose; scales of the calyx oblong, obtuse; pedicels bracteate.

HAB. Pine barrens. Sept.—Oct. 4. Root bulb.; stem. *slend.*; *fl. small.*

473. VERNONIA. *Compositæ.*

1. *V. noveboracensis*: leaves numerous, lanceolate, scabrous, serrulate; corymb fastigiate; scales of the calyx filiform at the extremity.

HAB. Low grounds. Aug.—Oct. 4. Stem 4—6 ft. high; fl. large, purp.

2. *V. præalta*: stem angular, densely pubescent; leaves numerous, lanceolate, acutely serrate, pubescent beneath; corymb fastigate; scales of the calyx ovate, acute, unarmed.

HAB. Meadows. Aug.—Oct. 4. Very tall; fl. purp.

474. KUHNIA. *Compositæ*.

1. *K. eupatorioides*: smooth; leaves petiolate, broad-lanceolate, serrate, corymb terminal, few-flowered, crowded.

HAB. Shady woods. Aug.—Sept. 4. Stem 2—3 ft. high; fl. wh.; cal. 10-fl.

2. *K. Critonia*: leaves linear, nearly entire, punctate beneath; panicle long, expanding.

HAB. Rocky banks. Sept. 4. Stem slender, striate, pubes.; fl. wh.; seed striate.

475. EUPATORIUM. Hemp Agrimony. *Compositæ*.

* Calyx 3—5-flowered.

1. *E. hyssopifolium*: stem erect; lowest leaves opposite, linear, very entire or subdentate, pubescent, 3-nerved; corymb subfastigate; style much longer than the corolla.

HAB. Pine barrens. Aug. 4. Stem 2 ft. high; leav. punc; fl. wh.

2. *E. linearifolium*: stem subprocumbent, villous above; stem-leaves opposite, lanceolate-linear, rarely dentate, sometimes fasciculate; style as long as the corolla.

HAB. Sandy fields. Aug.—Nov. 4. Stem 1—2 ft. high, subviscid; fl. wh.

3. *E. sessilifolium*: leaves sessile, amplexicaul, distinct, ovate-lanceolate, rounded at the base, very smooth; stem smooth.

HAB. Rocky woods. Aug.—Sept. 4. Stem 2 ft. high; leav. large; fl. wh.

4. *E. truncatum*: leaves sessile, amplexicaul, distinct,

lanceolate, truncate at the base, serrate, nearly smooth ; stem pubescent.

HAB. Rocky woods. July—Oct. 4. *Leav. punct., coarsely serrate ; fl. wh.*

5. *E. album*: leaves subsessile, oblong-lanceolate, scabrous, serrate ; interior scales of the calyx long, scarious, and white.

HAB. Pine barrens. Sept.—Oct. 4. *Stem 18 in. high, slend., pubes., cal. gland.*

6. *E. lanceolatum*: leaves sessile, distinct, oblong-lanceolate, scabrous, deeply serrate at the base ; scales of the calyx of one colour.

HAB. Low grounds. Aug.—Nov. *Fl. white.*

7. *E. teucrifolium*: leaves sessile, distinct, ovate, scabrous, coarsely serrate at the base ; uppermost ones entire.

HAB. Low grounds. Aug.—Sept. 4. *Stem 2 ft. high ; leav. subamplex. ; fl. wh.*

8. *E. melissoides*: leaves petiolate ovate, rather obtuse, serrate, veined, smoothish.

HAB. Pennsylvania. 4. *Fl. wh.*

9. *E. rotundifolium*: leaves sessile, roundish-cordate, obtusely serrate, veined ; scales of the calyx acuminate.

HAB. Sandy fields. Sept.—Oct. 4. *Stem 18 in. high ; leav. large ; fl. subfastig.*

10. *E. pubescens*: leaves sessile, distinct, ovate, scabrous, veined ; the lower ones doubly serrate ; upper ones subserrate ; stem paniculate, pubescent ; branches fastigiate.

HAB. Sandy woods. Aug.—Oct. 4. *Branched ; leav. acute ; fl. wh.*

11. *E. ceanothifolium*: leaves petiolate, ovate, acuminate, dentate, triply nerved, smooth.

HAB. Rocky woods. Aug.—Nov. 4. *Stem 2 ft. high ; leav. large ; fl. wh.*

12. *E. ovatum*: hairy, scabrous ; leaves opposite, sessile ; ovate, obtusely dentate ; corymb fastigiate ; calyxes about 8-flowered.

HAB. Low grounds. July—Aug. 4. *Stem 3—4 ft. high ; fl. wh. ; cal. hairy.*

13. *E. altissimum*: leaves subsessile, lanceolate, 3-

nerved, attenuate at each end, pubescent; the inferior ones serrate about the middle.

HAB. Sandy woods. Aug.—Oct. 4. Stem 3—7 ft. high; fl. white.

14. *E. amœnum*: leaves on short petioles, opposite and ternate, lanceolate-oblong, acute at each extremity, serrate, nearly smooth, subrugose; reticulately veined beneath; corymb crowded; scales of the calyx acute, coloured.

HAB. Mountains. Sept.—Oct. 4. Stem 2 ft. high, solid; pedunc. toment.; fl. purp.

15. *E. trifoliatum*: leaves petiolate, ternate and quaternate, ovate, acuminate, serrate, subscabrous, punctate.

HAB. Woods. Aug.—Sept. 4. Stem 3—4 ft. high, solid; corymb. large, purp.

* * Calyx more than 5-flowered.

16. *E. purpureum*: leaves petiolate by fours or fives, ovate-lanceolate, serrate, rugosely veined, slightly scabrous; stem hollow.

HAB. Low grounds. Aug.—Sept. 4. Stem 5—6 ft. high, purp.; fl. purp.; cal. 8-leav.

17. *E. maculatum*: leaves petiolate, by fours or fives, ovate-lanceolate, unequally serrate, pubescent beneath; stem solid, sulcate.

HAB. Low grounds. Aug.—Sept. 4. Stem 4—5 ft. high, punct.; cal. 5—8-fl.

18. *E. verticillatum*: leaves petiolate, by threes or fours, ovate-lanceolate, acuminate at each end, unequally serrate, nearly smooth; stem solid

HAB. Wet woods. Aug.—Sept. 4. Stem 3—4 ft. high, slend.; cal. wh.; fl. purp.

19. *E. punctatum*: leaves petiolate, by fours and fives, acuminate, serrate, scabrous on both sides; stem solid, terete.

HAB. Mountains. Aug.—Oct. 4. Fl. purp.

20. *E. perfoliatum*: leaves connate-perfoliate, pubescent.

HAB. Low grounds. Aug.—Sept. 4. Stem 2 ft. high, branch., vill.; leav. large; fl. wh.

21. *E. celestinum*: leaves petiolate, cordate-ovate, ob-

tusely dentate, triply nerved, subscabrous; calyx many-leaved, many-flowered; flowers corymbed.

HAB. Mountains. Aug.—Sept. 4. Stem 2 ft. high; fl. large, blue, dense.

22. *E. aromaticum*: leaves petiolate, ovate, acute, obtusely dentate, subscabrous; stem paniculate above; flowers corymbed; calyx simple.

HAB. Dry woods. Aug. 4. Stem 2 ft. high, pubes.; leav. triply nerv.; fl. large, wh.

23. *E. ageratoides*: leaves on long petioles, subcordate, ovate, acuminate, dentate, nearly smooth, triply nerved; corymb many-flowered; calyx nearly equal.

HAB. Rocky hills. Aug.—Oct. 4. Stem 2 ft. high, smooth; fl. num., wh., small.

476. MIKANIA. *Compositæ*.

1. *M. scandens*: stem climbing, smooth; leaves cordate, repand-dentate acuminate, with divaricate unequal lobes; flowers corymbed.

HAB. Moist thickets July—Sept. 4. Leav. oppos.; corymb. axill., pink.

2. *M. pubescens*: stem climbing, pubescent; leaves cordate, acuminate, angularly dentate, pubescent on both sides; lobes divaricate, equal.

HAB. Low grounds. Sept. 4. Fl. pale purp.; odor.; cal. pubes.

477. CHRYSOCOMA. Goldy-locks. *Compositæ*.

C. virgata: herbaceous, smooth; leaves all narrow and linear; stem virgately branched; branches corymbiferous, fastigiate; calyx oblong, 3—4-flowered; scales glutinous and appressed.

HAB. Swamps. 4. Stem 18 in. high, branch.; leav. 1—2 in. long; fl. yell.

478. CACALIA. *Compositæ*.

1. *C. suaveolens*: stem herbaceous; leaves petiolate, hastate-sagittate, serrate, smooth, green on both sides; flowers corymbed, erect; calyx many-flowered.

HAB. Banks of rivers. Aug. 4. Stem 3—4 ft. high; leav. large; fl. wh.; anth. yell.

2. *C. atriplicifolia*: stem herbaceous; leaves petiolate, smooth, glaucous beneath; radical ones cordate, dentate; of the stem rhomboidal, subdentate on each side; flowers corymbed, erect; calyx 5-flowered.

HAB. Banks of rivers. Aug. 4. Stem 3—6 ft. high; pedunc. wh.; fl. sm., yell.

3. *C. reniformis*: stem herbaceous; leaves petiolate, smooth, hairy on the veins beneath; radical ones cordate, reniform, repandly dentate; of the stem oblong, dentate, cuneate and very entire at the base; corymb fastigate; calyx many-flowered.

HAB. Banks of rivers. July. 4. Stem 5—7 ft. high; fl. yell.-wh.

479. SPARGANOPHORUS. *Compositæ*.

S. verticillatus: leaves linear, verticillate; flowers few, terminal; pappus campanulate, 5-toothed.

HAB. Swamps. Aug. 4. Stem simp.; 1 ft. high, whorl. 6—8 leav.; fl. purp.

SUPERFLUA.

480. TANACETUM. Tansey. *Compositæ*.

T. vulgare: leaves doubly pinnate, incisely serrate.

HAB. Old fields, &c. Aug.—Sept. 4. Plant odor.; fl. dense, yell. ♂.

481. ARTEMISIA. Wormwood. *Compositæ*.

1. *A. canadensis*: stem herbaceous, paniculate, mostly erect; radical leaves subpinnate, slightly tomentose; cauline ones pinnate, segments subsetaceous, incised, flat, nearly smooth; flowers subglobose, sessile; scales of the calyx scarious.

HAB. Sandy shores. Aug. 4. Stem 3—4 ft. high, brownish; fl. glomerate.

2. *A. caudata*: stem simple, herbaceous, much branched, pyramidal; radical and cauline leaves bipinnate, pubescent; upper ones pinnate; segments

subsetaceous, alternate, divaricate, somewhat convex ; flowers pedicellate, erect, globose-ovate.

HAB. Sea shores. 4. Stem 2 ft. high.

3. *A. vulgaris*: leaves tomentose beneath ; cauline ones pinnatifid ; divisions lanceolate, subdentate, acute ; floral leaves linear-lanceolate, entire ; flowers subsessile, oblong, erect ; calyx tomentose.

HAB. Rocky hills. Sept. 4. Stem 2 ft. high ; leav. green above. ♂ ?

482. BACCHARIS. Ploughman's Spikenard. *Compositæ*.

B. halimifolia: leaves obovate, incisely dentate above ; panicle compound, leafy ; fascicles pedunculate.

HAB. Sea coast. Sept.—Oct. 2. Plant pulverulent ; leav. thick ; pap. long, silky.

483. CONYZA. Marsh-fleabane. *Compositæ*.

C. camphorata: leaves ovate-lanceolate, somewhat pubescent, acute, serrate ; the serratures mucronate ; flowers in crowded corymbs.

HAB. Salt marshes. Aug. 4. Strong-scented ; stem 1 ft. high ; fl. purp.

484. GNAPHALIUM. Cud-weed. *Compositæ*.

1. *G. plantagineum*: shoots procumbent ; stem simple ; radical leaves ovate, 3-nerved, mucronate ; flowers diœcious.

HAB. Dry hills and woods. Apr.—Sept. 4. Plant downy ; rad. leav. large ; fl. pale purp.

2. *G. polycephalum*: herbaceous, erect ; leaves linear-lanceolate, acute, smooth above, pubescent beneath ; stem paniculate, tomentose ; corymbs terminal, crowded.

HAB. Woods and low grounds. Aug. ☉. Strong-scented, branch. ; fl. clust., pale yell.

3. *G. margaritaceum*: herbaceous ; leaves linear-lanceolate, acuminate, alternate ; stem branched at the top ; corymb fastigiate ; flowers pedicellate.

HAB. Fields and woods. Aug. 4. Stem 1—2 ft. high, woolly ; fl. large, few, wh.

4. *G. uliginosum*: stem much branched; branches spreading, woolly; leaves linear-lanceolate; flowers in terminal, leafy crowded heads.

HAB. Low grounds, &c. Aug. ☉. Stem low, spread.; cal. yellowish.

5. *G. americanum*: stem herbaceous, erect, branched; leaves obovate-spathulate, pubescent beneath; flowers axillary and terminal, in glomerate spikes.

HAB. Fields and woods. June. ☉. Stem 6—8 in. high; fl. yell.-wh.

6. *G. purpureum*: herbaceous; leaves linear-spathulate, tomentose beneath; stem erect, simple; flowers sessile, glomerate, axillary and terminal.

HAB. Fields. June. ♀. Stolonif.; stem 8—12 in. high; fl. purplish.

7. *G. germanicum*: stem erect, proliferously branched upward; leaves lanceolate, cottony; flowers small, in dense round heads, axillary and terminal.

HAB. Fields. July. ☉. Stem 6—8 in. high; branch. few, horizontal; fl. yell.

8. *G. decurrens*: stem erect, much branched; leaves linear-lanceolate, very acute, decurrent, white and woolly beneath, naked above; flowers in dense terminal roundish clusters.

HAB. Hills and fields. Aug. ♀. Stem 2 ft. high; leav. green above; fl. yell.

9. *G. sylvaticum*: stem erect, simple, downy; flowers in a leafy spike; leaves linear-lanceolate, downy, particularly beneath.

HAB. Woods. July. ♀. Stem 12 in. high; base subdecumb.; cal. brownish.

185. ERIGERON. Flea-bane. *Compositæ*.

1. *E. bellidifolium*: hairy, gray; radical leaves obovate, subserrate; stem leaves remote, oblong-ovate, amplexicaul, entire; stem 3—5-flowered; rays nearly twice as long as the hemispherical calyx.

HAB. Hills. May. ♀. Stem erect, simp., 12—18 in. high; fl. pale purp.

2. *E. integrifolium*: stem simple, leafy, smooth; leaves lanceolate, entire, 3-nerved; flowers corymbeal; calyx hemispherical; scales acute.

HAB. Woods, &c. June—Aug. 4. Stem 2 ft. high; ; leav. rarely subdent.; fl. wh.

3. *E. philadelphicum*: pubescent; leaves cuneate-oblong, subserrate; those of the stem semiamplexicaul; florets of the ray capillary, as long as the disk; stem branched above, many-flowered.

HAB. Old fields. June—Oct. 4. Stem 2—3 ft. high, slend.; fl. pale purp.

4. *E. purpureum*: pubescent; leaves oblong, dentate, amplexicaul; upper ones very entire; peduncles corymbed, thick; the inferior ones elongated; rays twice as long as the calyx.

HAB. Woods. June. 4. Stem 2 ft. high; fl. large, purp.

5. *E. strigosum*: hairy and strigose; leaves lanceolate, attenuate at each end, with a few coarse teeth in the middle, or entire; flowers in a corymbose panicle.

HAB. Fields and woods. June—Oct. ♂. Stem 2—3 ft. high, sulc.; rays capill., wh.

6. *E. heterophyllum*: radical leaves roundish-ovate, with large teeth, petiolate; stem leaves lanceolate, acute, serrate in the middle; corymb terminal.

HAB. Meadows. June—Oct. ♂. Stem 2—3 ft. high; leav. large; fl. wh.

* Subgenus CÆNOTUS. Calyx oblong; rays very numerous, minute; pappus simple.

7. *E. canadense*: stem hairy or hispid, paniculate; leaves lanceolate; lower ones subserrate; rays crowded, very short.

HAB. Fields and cultivated grounds. Aug.—Nov.

⊙. Stem 4 in.—5 ft. high. Variable.

486. INULA. Compositæ.

1. *I. Helenium*: leaves amplexicaul, ovate, rugose, tomentose beneath; scales of the calyx.

HAB. Road sides. July—Aug. 4. Stem 3—4 ft. high; leav. large; fl. yell.

* Subgenus *CHRYSOPSIS*. *Calyx imbricated; rays of the corolla mostly yellow; anthers naked at the base; pappus double; exterior paleaceous minute; interior scabrous, many-rayed; seeds obovate, villous.*

2. *I. mariana*: hairy; leaves oblong-lanceolate, serrate; upper ones sessile, acute; lower spatulate, mostly obtuse; corymb simple; calyx viscidly pubescent.

HAB. Woods. Aug. 4. Stem 18 in. high; rays 10—12 oblong.

3. *I. falcata*: woolly and villous; leaves sessile, linear, acute, rigid, subfalcate; calyx subtomentose.

HAB. Pine-barrens. Sept—Oct. 4. Stem 6—12 in. high; fl. small.

4. *I. graminifolia*: silky; leaves lanceolate, linear, acute, entire, nerved; corymb compound; stem leafy towards the summit.

HAB. Sandy woods. Aug.—Oct. 4. Stem 2 ft. high; leav. long, subrigid.

487. ASTER. Starwort. *Compositæ*.

* *Calyx white, green at the summit; florets of the ray about 5, white.*

1. *A. solidaginoides*: leaves linear-lanceolate, entire, scabrous on the margin; flowers sessile aggregate; calyx imbricate, with the scales obtuse, appressed.

HAB. Dry woods. July—Aug. 4. Stem 2 ft. high; fl. fastig.-corymb.

2. *A. conyzoides*: leaves oval-lanceolate, acute, serrate towards the summit, triply nerved; the lower ones attenuate at the base; upper entire; scales of the calyx oval, obtuse, appressed, slightly reflexed at the summit.

HAB. Woods and copses. July—Aug. 4. Stem 2 ft. high; leav. thick; cal. cylind.

** *Florets of the ray numerous; pappus single.*

† *Leaves entire.*

3. *A. hyssopifolius*: leaves linear-lanceolate, 3-nerved, punctate, acute, scabrous on the margin; branches

fastigiate, clustered ; florets of the ray about 5 ; calyx imbricate, half as long as the disk.

HAB. Sandy fields. Aug. 4. Stem 18 in. high, *slend.* ; *fl. small, wh., or purplish.*

4. *A. subulatus* : smooth ; stem much branched from the base, paniculate ; leaves long and linear, very acute ; uppermost subulate ; calyx subcylindric, with subulate scales ; radical florets minute.

HAB. Salt marshes. Aug.—Nov. ☉! Stem 12—18 in. high ; *fl. small, purp.*

5. *A. foliolosus* : leaves linear-lanceolate, attenuate at each end, acuminate ; stem pubescent, paniculate, erect ; branches few-flowered ; calyx imbricate, with linear acute appressed scales.

HAB. Dry fields. Aug.—Oct. 4. *Fl. small, white.*

6. *A. paludosus* : stem simple ; leaves linear subulate, smooth, amplexicaul ; peduncles few, one-flowered, pubescent, leafy ; calyx squarrose.

HAB. Open swamps. Aug. 4. Stem 3—5 fl. ; *fl. large, blue ; cal. subfoliaceous.*

7. *A. tenuifolius* : leaves linear-lanceolate, tapering at each end, very entire ; margin slightly scabrous ; stem smooth, branched, erect, with 1-flowered branches ; scales of the calyx acute, loose.

HAB. Fields. Sept. 4. Stem 2 ft. high, *pubes. above ; fl. sm., pale purp.*

β. *dumosus* : branches paniculate, with very short leaves.

HAB. Fields. Sept. *Fl. wh. or pale purp.*

γ. *ericoides* : leaves linear ; those on the branches short and approximate ; stem smooth.

HAB. Rocky fields. Sept. *Lower leaves long ; very smooth ; fl. pale purp.*

8. *A. multiflorus* : leaves linear, entire, nearly smooth, somewhat ciliate ; stem diffusely branched, pubescent, calyx imbricate squarrose, with oblong, ciliate scales.

HAB. Rocky fields. Sept. 4. Stem 2 ft. high, *very pubes. ; fl. wh. ; disk yell.*

β. *ciliatus* : leaves distinctly ciliate ; those of the branches very short.

HAB. With the preceding.

9. *A. sparsiflorus*: very smooth; stem sparingly branched, somewhat flexuous; leaves long and succulent; the inferior ones sublanceolate-linear; superior subulate; branches one-flowered, leafy; scales of the calyx lanceolate, acuminate, appressed; rays numerous, shorter than the calyx.
HAB. Salt marshes. Aug.—Oct. 4. *Stem 12 in. high; fl. large, purp.*
10. *A. concolor*: leaves oblong-lanceolate, entire, whitish-pubescent on both sides; stem simple, erect, pubescent; raceme terminal; scales of the calyx lanceolate, silky, appressed.
HAB. Pine barrens. Oct. 4. *Root often tuber.; stem virg.; fl. large, blue.*
11. *A. salicifolius*: leaves linear-lanceolate, nearly entire; stem smooth, paniculate above; calyx loose, imbricate; scales acute, spreading at their points.
HAB. Low grounds. Sept. 4. *Stem tall; fl. middle-sized, reddish-blue.*
12. *A. æstivus*: leaves lanceolate, subamplexicaul, attenuated at the apex; margin scabrous; stem branched from the base, erect, hispid; branches hairy; scales of the calyx loose, linear, acute, equal.
HAB. Dry swamps. Sept. 4. *Stem 2 ft. high; fl. middle-sized; rays blue.*
13. *A. novae angliae*: leaves linear-lanceolate, amplexicaul, auriculate at the base; stem hairy and paniculate; flowers subsolitary on the branchlets, somewhat fastigiate; scales of the calyx loose, linear-lanceolate, rather longer than the disk.
HAB. Fields. Aug.—Oct. 4. *Stem 4—6 ft. high; fl. large, purp.-bl.; rays numerous.*
14. *A. cyaneus*: leaves linear-lanceolate, amplexicaul, smooth; stem branched, with the branches expanding, very smooth; flowers in paniculate racemes; scales of the calyx loose, lanceolate, as long as the disk.
HAB. Along fences. Sept. 4. *Stem 3 ft. high, subglauc.; fl. blue, large.*
15. *A. phlogifolius*: leaves lanceolate, cordate, amplexicaul, pubescent beneath, scabrous on the

margin; stem simple, pubescent; panicle terminal, loose, few-flowered; scales of the calyx loose, lanceolate.

HAB. Sandy woods. Sept. 4. Stem 12—13 in. high, *slend.*; *fl. violet.*

16. *A. patens*: leaves oblong-lanceolate, ciliate, cordate and amplexicaul, scabrous and hairy on both sides, those on the branches minute; branches spreading, elongated, few-flowered; scales of the calyx spreading, lanceolate.

HAB. Rocky soils. Sept.—Oct. 4. Stem 1½—2 ft. high; *fl. blue.*

†† Leaves lanceolate and ovate; the lower ones serrate.

a Flowers corymbed.

17. *A. nudiflorus*: stem simple and smooth; leaves sessile, ovate-lanceolate, subacuminate, all sharply serrate, scabrous above; corymb few-flowered; peduncles pubescent, naked, mostly 1-flowered; calyx hemispherical, closely imbricate; scales linear-oblong, ciliate.

HAB. Swamps. 4. Stem 2—3 ft. high; *pedunc. long*; *fl. large, pale purp.*

18. *A. Radula*: leaves lanceolate, serrate, acuminate, rugous and very scabrous; stem erect, angular, simple; corymb terminal; calyx imbricate; scales lanceolate, rather obtuse, subsquarrose.

HAB. High mountains. Sept. 4. *Fl. middle sized*; *rays short, white.*

19. *A. strictus*: leaves sessile, narrow-lanceolate, serrate, scabrous; stem one or few-flowered at the summit; scales of the calyx imbricate, appressed, oblong, acute, about equal to the disk.

HAB. High mountains. Sept.—Oct. 4. Stem 4—8 in. high; *fl. pale violet.*

20. *A. surculosus*: stem simple, low, slender, minutely pubescent; lower leaves linear-lanceolate, entire, or subserrate, scabrous above; upper ones linear, amplexicaul; corymb 3—5 flowered, somewhat naked; calyx imbricate, subsquarrose; scales ciliate, linear-oblong; inner ones obtuse; rays numerous.

HAB. Margin of swamps. 4. *Root stolonif., creep.; fl. large, purp.*

21. *A. spectabilis*: leaves oblong-lanceolate, somewhat scabrous, subamplexicaul; lower ones serrate in the middle; branches corymbed; calyx hemispherical, with a subglandular pubescence, foliaceous, and squarrose; leaflets ciliate, cuneate-ovate, partly acute.

HAB. Sandy swamps. Oct. 4. *Branch. 2—3-fl.; fl. large, blue.*

- β. *bellidifolius*: leaves oblong-obovate, serrate, corymb nearly simple, or with the branches mostly 1-flowered.

HAB. With the preceding. *Stem not hairy and glandular above.*

22. *A. serotinus*: leaves oblong-lanceolate, acuminate, sessile, smooth, scabrous on the margin; inferior serrate; branches corymbose, smooth; branchlets one-flowered; scales of the calyx lanceolate, acuminate, spreading.

HAB. Low grounds. Sept.—Oct. 4. *Stem 3 ft. high; fl. large, blue.*

23. *A. puniceus*: leaves amplexicaul, lanceolate, serrate, somewhat scabrous; branches paniculate; calyx loose, longer than the disk; leaflets linear-lanceolate, subequal; stem hispid.

HAB. Brackish swamps. Sept. 4. *Stem 6 ft. high, purp.; fl. large, purp.*

24. *A. floribundus*: leaves subamplexicaul, lanceolate; inferior serrate; stem smooth; branches corymbed; branchlets many-flowered, hairy; scales of the calyx loose, lanceolate, imbricate.

HAB. Pennsylvania. 4.

25. *A. novi belgii*: leaves subamplexicaul, lanceolate, smooth, scabrous on the margin; inferior subserrate; branches subdivided; calyx loose, imbricate; leaflets linear-lanceolate; stem terete, smooth.

HAB. Fields. Aug.—Sept. 4. *Stem 3 ft. high; fl. middle sized, purp.*

26. *A. acuminatus*: leaves broad-lanceolate, narrowed and entire at the base, unequally serrate above, long-acuminate; stem simple, flexuous, angular;

panicle divaricately dichotomous; scales of the calyx loose, linear.

HAB. Mountains. Sept. 4. Stem 12 in. high; leav. large; fl. wh.

27. *A. dracunculoides*: leaves linear, acuminate, entire; lower linear-lanceolate, slightly serrate; branches corymbose; calyx imbricate; stem nearly smooth.

HAB. Fields. Sept.—Oct. 4. Stem 3 ft. high; fl. small, wh.

b *Flowers paniced.*

28. *A. amplexicaulis*: leaves ovate-oblong, acute, amplexicaul, cordate, serrate, smooth; stem paniculate, smooth; branches 1—2-flowered; scales of the calyx closely imbricate.

HAB. Dry woods. Sept.—Oct. 4. Stem 18 in. high; fl. blue.

29. *A. laevigatus*: leaves subamplexicaul, broad-lanceolate, subserrate, smooth; stem much branched, smooth; branches many-flowered; scales of the calyx lanceolate, loose, equal to the disk.

HAB. Low grounds. Oct. 4. Stem 2—3 ft. high; fl. pale purp.

30. *A. versicolor*: leaves subamplexicaul, broad-lanceolate, subserrate, smooth; radical ones serrate in the middle; stem much branched, smooth; scales of the calyx lanceolate, loose, shorter than the disk.

HAB. Fields. Sept.—Oct. 4. Stem 2 ft. high; fl. pale blue or white.

31. *A. mutabilis*: leaves subamplexicaul; upper ones lanceolate, acuminate, very entire; inferior lanceolate, narrow at the base, serrate; branches virgate; calyx loose, shorter than the disk; stem smooth.

HAB. Fields and dry woods. Sept. 4. Stem 2—3 ft. high; fl. purp.

32. *A. laevis*: leaves subamplexicaul, remote, oblong, very entire, shining; radical ones subserrate; branches simple 1-flowered, scales of the calyx subcuneiform, acute, thickened at the tip; stem smooth angular.

HAB. Low grounds. Oct. 4. Stem 2 ft. high ;
fl. large, blue.

33. *A. concinnus* : leaves lanceolate, subamplexicaul ; inferior ones subserrate, smooth ; stem simple, paniculate above ; calyx closely imbricate.

HAB. Fields. Sept. 4. Stem 2 ft. high ; fl. purple.

34. *A. bellidiflorus* : leaves amplexicaul, narrow-lanceolate, scabrous above ; inferior ones subserrate ; stem much branched ; scales of the calyx lanceolate, spreading.

HAB. Pennsylvania. A var. of *A. spectabilis* ?

35. *A. tardiflorus* : leaves sessile, spatulate-lanceolate, serrate, smooth, attenuate at the base ; margin reflexed ; branches divaricate ; calyx loose ; scales lanceolate-linear, subequal, smooth.

HAB. Low grounds. Sept.—Oct. 4. Fl. middle-sized, violet.

36. *A. Tradescanti* : leaves lanceolate, serrate, sessile, smooth ; branches virgate ; calyx loose, imbricate ; stem terete, smooth.

HAB. Fields. Aug.—Oct. Stem 3 ft. high ; fl. small, wh. or blue.

β. recurvatus : leaves narrow-lanceolate ; stem recurved.

37. *A. eminens* : leaves linear-lanceolate, acuminate, scabrous on the margin ; inferior ones subserrate ; stem paniculate ; branches one-flowered ; calyx loosely-imbricate ; scales lanceolate.

HAB. Fields. Sept. 4. Fl. lilac.

38. *A. laxus* : leaves linear-lanceolate, acuminate, scabrous on the margin ; the lower ones subserrate, those of the stem subreflexed, of the branches much spreading ; stem loose, paniculate above ; calyx imbricate ; scales lanceolate, acute, reflexed at the apex.

HAB. Fields. Sept.—Oct. 4. Fl. small, white.

39. *A. simplex* : leaves lanceolate, acuminate, scabrous on the margin, those of the stem serrate at the end, of the branches very entire ; stem quite smooth, paniculate above ; calyx loose ; scales linear-subulate.

HAB. Pennsylvania. 4. Fl. wh.

40. *A. polyphyllus* : leaves linear, very entire ; radical ones oblong, subserrate ; stem much branched, pubescent ; calyx loose.

HAB. Pennsylvania. 4. *Fl. white.*

41. *A. junceus* : leaves lanceolate-linear, sessile, smooth ; lower ones subserrate ; stem paniculate, smooth ; branches virgate ; calyx imbricate.

HAB. Low grounds. Oct. 4. *Stem tall, slend. ; fl. flesh-col.*

β. lanceolatus : stem branched, diffuse, rather smooth.

42. *A. fragilis* : leaves linear, acuminate, very entire ; radical ones serrate, oblong ; branches corymbose-paniculate ; scales of the calyx appressed ; stem nearly smooth.

HAB. Old fields. Sept. 4. *Stem 2 ft. high ; fl. small, wh.*

43. *A. miser* : leaves sessile, lanceolate, serrate, smooth ; scales of the calyx acute ; disk equal to the ray ; stem somewhat villous.

HAB. Old fields. Sept.—Oct. *Fl. small, white.*

α. divergens : leaves elliptical-lanceolate, those of the stem elongated ; branches spreading.

β. diffusus : leaves all proportioned.

γ. pendulus : leaves of the branches rather remote ; branches very divaricate, pendulous.

c Leaves cordate, serrate.

44. *A. undulatus* : leaves oblong-cordate, amplexicaul, very entire, hairy, somewhat undulate ; inferior ones ovate, cordate, subserrate ; petioles winged ; stem paniculate, hispid ; branches secund, leafy, 1-flowered.

HAB. Dry woods, &c. Sept. 4. *Stem 2 ft. high ; fl. middle-sized, bl.*

45. *A. sagittifolius* : leaves oblong-lanceolate, acuminate, sessile, serrate in the middle ; radical ones oblong, cordate-sagittate, serrate, petiolate ; stem branched, smooth ; scales of the calyx loose, lanceolate.

HAB. In rocky woods ? Sept. 4. *Fl. middle-sized, blue.*

46. *A. paniculatus* : leaves ovate-lanceolate, subserrate, petiolate, smooth ; radical ones ovate-cordate,

serrate, scabrous, petiolate ; petioles naked ; stem much branched, smooth ; branches hairy ; calyx loose, subimbricate.

HAB. Fields and woods. Sept. 24. Stem 2—3 ft. high ; fl. pale blue. Near *A. undulatus*.

47. *A. cordifolius* : leaves cordate, hairy beneath, acutely serrate, petiolate ; petioles winged ; stem paniculate, smoothish ; panicle divaricate ; calyx loose, subimbricate.

HAB. Rocky woods. Sept. 24. Stem 2 ft. high ; fl. rather small, pale blue.

48. *A. corymbosus* : leaves ovate, acutely serrate, acuminate, smoothish ; inferior ones cordate, petiolate ; petioles naked ; stem smooth, corymbose-fastigiate above ; branches hairy ; calyx oblong, imbricate ; scales obtuse, closely appressed.

HAB. Dry woods. July—Aug. 24. Stem 2 ft. high ; fl. middle-sized, wh.

49. *A. macrophyllus* : leaves ovate, petiolate, serrate, scabrous ; upper ones ovate-cordate, sessile ; inferior cordate, petiolate ; petioles somewhat margined ; stem branched, diffuse ; calyx cylindrical, closely imbricate ; scales oblong, acute.

HAB. Woods. Aug. 24. Stem 2 ft. high ; fl. pretty large, wh. or pale bl.

*** *Pappus* double ; flowers mostly corymbed.

50. *A. linariifolius* : leaves linear, mucronate, thick, without nerves or punctures, carinate, scabrous, rigid ; those of the branches recurved ; stem subdecumbent ; branches fastigiate, elongated, 1-flowered ; calyx imbricate, as long as the disk.

HAB. Dry fields, and on rocks. Sept.—Oct. 2 ft. high ; fl. violet.

51. *A. rigidus* : leaves linear, mucronate, subcarinate, rigid ; margin scabrous-ciliate ; stem-leaves reflexed, of the branches spreading, subulate ; stem erect, somewhat branched above ; branches 1-flowered, corymbed ; calyx imbricate, half the length of the disk ; scales carinate, rather obtuse ; rays about 10-flowered, reflexed.

HAB. Sandy fields. Sept. 24. 2 ft. high ; fl. middle-sized, violet.

52. *A. linifolius*: leaves linear, without nerves or punctures, scabrous, reflexed-spreading; branches corymbose-fastigiate, leafy; calyx imbricate, short; rays equal to the disk.

HAB. Dry woods, &c. Sept.—Nov. 4. *Stem 1—2 ft. high; fl. large, wh. or pale blue.*

53. *A. humilis*: leaves oblong-ovate, acuminate, acute at the base, scabrous on the margin; petiole short; stem smooth, dichotomously paniculate above, few-flowered; calyx loose, subimbricate.

HAB. Woods, &c. Aug. 4. *Stem 1—2 ft. high; leav. large; fl. wh.*

54. *A. amygdalinus*: leaves lanceolate, attenuate at the base, acuminate, scabrous on the margin; stem simple, corymbose-fastigiate at the summit; calyx loose, imbricate; scales lanceolate, obtuse.

HAB. Fields and low grounds. July—Aug. 4. *A foot high; fl. wh.*

488. SOLIDAGO. Golden-rod. *Compositæ.*

* *Racemes secund; leaves triply nerved.*

1. *S. canadensis*: stem villous, leaves lanceolate, serrate, triply nerved, scabrous; racemes paniculate, secund, recurved; rays short.

HAB. Old fields, &c. Aug.—Sept. 4. *Stem 3—4 ft. high; leav. large.*

2. *S. procera*: stem villous, erect; leaves lanceolate, serrate, scabrous, villous beneath; racemes spiciform, erect, when young drooping; rays short.

HAB. Low grounds. Sept.—Oct. 4. *Stem 4—6 ft. high.*

3. *S. serotina*: stem erect, terete, smooth; leaves linear-lanceolate; racemes paniculate, secund; peduncles pubescent.

HAB. Meadows. Sept. 4. *Stem 4 ft. high; young leaves ciliate.*

4. *S. gigantea*: stem erect, smooth; leaves lanceolate, serrate, scabrous on the margin, obscurely triply-nerved; racemes paniculate, secund; peduncles hairy; rays short.

HAB. Low meadows. Sept.—Oct. 4. *Stem 4—7 ft. high, purplish.*

5. *S. ciliaris*: stem erect, smooth; leaves lanceolate, subtriply nerved, smooth, except on the margin, subserrate; racemes paniculate, secund; peduncles smooth; bracts ciliate; rays short.

HAB. Borders of woods. Aug. 4. Stem 3 ft. high, angul.; radical. leav. long.

6. *S. reflexa*: stem erect, villous; leaves lanceolate, subserrate, triply nerved, scabrous, reflexed; branches paniculate, subsecund, reflexed.

HAB. Fields. Aug. 4.

7. *S. lateriflora*: stem erect, somewhat hairy; leaves lanceolate, subtriply nerved, smooth, scabrous on the margin; lower ones subserrate; racemes paniculate, subrecurved, secund.

HAB. Meadows. Aug. 4. Stem 2—3 ft. high; rays elongated.

* * *Racemes secund; leaves veined.*

8. *S. aspera*: stem erect, terete, hairy; leaves ovate and somewhat elliptical, very rough, rugous, serrate, without nerves; racemes paniculate, secund.

HAB. Fields. Sept. 4. Stem 3 ft. high; leav. acute; racem. dense.

9. *S. altissima*: stem erect, hirsute; leaves lanceolate, the lower ones deeply serrate, very rough, rugous; panicles secund; rays short.

HAB. Old fields. Sept.—Oct. 4. Stem 3—5 ft. high.—Variable.

10. *S. rugosa*: stem erect, hairy; leaves lanceolate, very rough and rugous; the lower ones with appressed serratures; racemes paniculate, widely spreading.

HAB. Stony fields. Sept.—Oct. 4. Stem 4 ft. high.

11. *S. scabra*: stem erect, hairy, sulcate; leaves oblong, attenuate at each end, acuminate, smooth above, rugous and scabrous beneath, with appressed serratures in the middle; racemes secund.

HAB. Meadows. Aug.—Sept. 4. Stem 3 ft. high.

12. *S. nemoralis*: stem erect, woolly; cauline leaves

lanceolate, hispid, very entire ; radical ones subcuneiform, serrate ; racemes paniculate ; secund.

HAB. Barren fields. Sept. 4. *Plant gray, 1—2 ft. high.*

13. *S. patula* : stem erect, smooth ; leaves elliptical, serrate, smooth ; lower ones oblong-spathulate ; racemes paniculate, secund, spreading ; peduncles pubescent.

HAB. Dry woods. Sept. 4. *Stem 2 ft. high, virgate ; racemes short.*

14. *S. ulmifolia* : stem erect, smooth, striate ; leaves elliptical, deeply serrate, acuminate, villous beneath ; radical ones obovate ; racemes paniculate, secund ; peduncles villous ; rays short.

HAB. Low grounds. Aug.—Sept. 4. *Stem 3 ft. high ; leaves large.*

15. *S. arguta* : stem erect, smooth ; leaves smooth, acutely and unequally serrate ; cauline ones elliptical ; radical ovate-oblong ; racemes paniculate, secund ; rays elongate.

HAB. Meadows. Aug. 4. *Stem 2 ft. high.*

16. *S. juncea* : stem erect, smooth ; leaves lanceolate, smooth except on the margin ; lower ones serrate ; racemes paniculate, secund.

HAB. Meadows and dry woods. Sept. 4. *Stem 3 ft. high, slender.*

17. *S. elliptica* : stem erect, smooth ; leaves elliptical, smooth, serrate ; racemes paniculate, secund ; rays of middling length.

HAB. Dry woods. Sept. 4. *Stem 3 ft. high ; leav. large and broad.*

18. *S. sempervirens* : stem erect, smooth ; leaves linear-lanceolate, somewhat fleshy, smooth, very entire, scabrous on the margin ; racemes paniculate, secund ; peduncles hairy.

HAB. Swamps. Sept.—Oct. 4. *Stem 2 ft. high, subglauc. ; rays narrow, elong., 5—6.*

19. *S. virgata* : stem smooth, quite simple ; leaves subcuneate-lanceolate, obtuse, very smooth, upper ones very entire, appressed to the stem, growing smaller above ; branches of the panicle elongate, racemed at the summit ; peduncles smooth, secund.

HAB. Swamps. Oct. 4. *Stem atten.*, 3—4 ft. high; *lower leav. subserrate*; *fl. small*.

20. *S. odora*: stem erect, pubescent, slender; leaves linear-lanceolate, very entire, smooth, scabrous on the margin; racemes paniculate, secund.

HAB. Rocky hills and dry woods. July—Aug. 4. *Stem subvirg.*; *plant odorous*.

* * * *Racemes erect*.

31. *S. speciosa*: stem smooth, simple, or with virgate branches; leaves lanceolate, entire, somewhat fleshy; lower ones very broad; radical subserrate; racemes erect and compound, pubescent; rays about 5, elongate.

HAB. Shady woods. 4. *Stem* 4—6 ft. high, *sulc.*; *leav. large*; *pedunc. short*.

22. *S. bicolor*: stem hairy; leaves elliptic, hairy; lower ones serrate; branches leafy; racemes short, dense, erect; scales of the calyx obtuse.

HAB. Dry hills and woods. July—Aug. 4. *Stem* 1—2 ft. high; *rays white*.

23. *S. stricta*: stem erect, smooth; cauline leaves lanceolate, very entire, smooth, scabrous on the margin; radical ones serrate; racemes paniculate, erect; peduncles smooth.

HAB. Sandy woods. Sept. 4. *Stem* 2 ft. high; *panic. dense*.

24. *S. petiolaris*: stem erect, villous; leaves elliptic, somewhat scabrous, petiolate; racemes erect; rays elongate.

HAB. Sandy fields. Sept.—Oct. 4. *Stem branch.*; *racem. numerous, short*.

25. *S. lanceolata*: stem angular, hairy, much branched; leaves lanceolate-linear, entire, 3—5-nerved, scabrous on the margin, minutely hispid on nerves beneath; corymbs terminal, fastigate; rays 15—20, as long as the disk.

HAB. Meadows. Sept. 4. *Stem* 3—4 ft. high; *fl. glomerate*; *cal. ovate*.

26. *S. tenuifolia*: stem angular, much branched, smoothish; leaves linear, very narrow, numerous, scabrous-ciliate on the margin, obscurely 3-

nerved, punctate above ; corymbs fastigate ; rays about 10, exserted.

HAB. Sandy fields. Sept.—Oct. 4. *A foot high ; fl. glomerate ; axils leafy.*

27. *S. caesia* : stem smooth, glaucous, erect ; leaves lanceolate, smooth ; racemes erect ; rays of middling length.

HAB. In dry woods. Sept. 4. *Stem slend., 2 ft. high, subvirgate ; pedicles scab.*

28. *S. flexicaulis* : stem flexuous, smooth, angular ; leaves ovate-lanceolate, acuminate, serrate, glabrous ; racemes axillary ; rays half as long again as the calyx.

HAB. Fields and woods. Sept. 4. *Stem slend. purp., 2 ft. high ; racem. short.*

29. *S. latifolia* : stem somewhat flexuous, angular, smooth ; leaves broadly ovate, acuminate, deeply serrate, smooth, petioles winged ; racemes axillary.

HAB. Dry Woods. Sept.—Oct. 4. *Stem 18 in. high ; leav. 2 in. broad, atten. at base.*

30. *S. hispida* : stem erect, hispid, scabrous ; leaves lanceolate, scabrous, very entire ; radical ones serrate ; racemes erect ; rays of middling length.

HAB. Fields and woods. Sept. 4. *Resembles No. 27.*

31. *S. laevigata* : stem erect, smooth ; leaves oblong-lanceolate, fleshy, very entire, very smooth ; racemes paniculate, erect : peduncles scaly, villous ; rays elongate.

HAB. Salt marshes. Sept.—Oct. 4. *Stem 4—5 ft. high ; rays about 10 ; radical leaves subobovate.*

32. *S. limonifolia* : stem smooth ; leaves lanceolate, somewhat fleshy, very entire, smooth ; racemes paniculate, suberect, nearly naked ; peduncles scaly, pubescent ; rays about 10.

HAB. Marshes. Aug. 4. *Stem 3—4 ft. high ; pedunc. mostly 1-flow.*

33. *S. viminea* : stem erect, subpubescent ; leaves linear-lanceolate, membranaceous, attenuate at the base, smooth, scabrous on the margin ; lower ones subserrate ; racemes erect ; rays elongate.

HAB. Low grounds. Sept. 4.

34. *S. rigida*: stem hairy and scabrous; leaves ovate-oblong, rough, with minute hairs; those of the stem very entire; lower ones serrate; flowering branches paniculate; racemes compact; rays elongate; scales of the calyx obtuse.

HAB. Rocky woods. Aug.—Sept. 4. *Stem tall; leaves rigid; fl. very large.*

35. *S. noveboracensis*: radical leaves ovate oblong, petiolate; stem somewhat naked, fastigiately branched.

HAB. Meadows. Sept. 4. *Stem 3 ft. high, thick; leav. rough; fl. large.*

36. *S. squarrosa*: stem thick, pubescent above; leaves smooth; lower ones very broad, spathulate-oval, serrate, acute; upper ones lanceolate-elliptic; racemes glomerate, rigid, and pubescent; calyx squarrose, many-flowered; rays 10—12, elongate.

HAB. Rocky hills. Sept. 4. *Stem 2 ft. high; fl. very large.*

489. ARNICA. *Compositæ.*

- A. nudicaulis*: hairy; radical leaves decussate and opposite, oblong-oval, subdentate; stem nearly leafless, divided at the summit into several 1-flowered branches.

HAB. Woods. June. 4. *Stem 1—2 ft. high; leav. large, rough beneath; fl. large, yellow.*

490. SENECIO. Groundsel. *Compositæ.*

* *Florets of the rays wanting.*

1. *S. hieracifolius*: stem virgate, paniculate; leaves oblong, amplexicaul, unequally and deeply toothed; dentures acute; calyx smooth; seeds hairy.

HAB. Fields, &c. Aug.—Oct. ☉. *Stem 2—3 ft. high, subscab.; calyx ventric., large; fl. wh.*

2. *S. vulgaris*: leaves mostly amplexicaul, sinuate-pinnatifid, toothed; stem paniculate, erect, angular.

HAB. Waste grounds. Aug. ☉. *Stem 18 in. high; leav. thin; fl. pale yell. ♂.*

3. *S. elongatus*: radical leaves spathulate, attenuate

into a petiole, serrate ; stem leaves pinnatifid, toothed, very remote ; peduncles elongate, umbellate, corymbed.

HAB. Rocky banks. July—Aug. 4. Resembles *S. Balsamitæ*.

* * *Flowers radiate.*

4. *S. gracilis* : radical leaves on very long petioles, orbicular, subcordate, crenate ; stem-leaves few, very remote, linear-oblong, dilated at the base, incisely dentate ; peduncles very short, hairy, subumbellate ; calyx smooth ; rays few, very short.

HAB. Rocky banks. May—Aug. 4. *A foot high ; fl. small.*

5. *S. aureus* : radical leaves ovate, cordate, serrate, petiolate ; stem leaves pinnatifid, dentate, terminal segment lanceolate ; peduncles subumbellate, thick.

HAB. Rocky woods. May. 4. *Stem 18 in. high ; umb. simp. ; fl. yell.*

6. *S. Balsamitæ* : radical leaves oblong, serrate, petiolate ; lower cauline leaves lyrate-pinnatifid, serrate ; upper ones pinnate, dentate ; flowers somewhat umbellate ; stem and peduncles villous at the base.

HAB. Meadows, &c. June. 4. *Stem 1—2 ft. high ; leav. subpubes. ; fl. yellow.*

7. *S. heterophyllus* : woolly and downy ; leaves on long petioles, ovate-spathulate and ovate, rather acute and pinnatifid ; cauline ones 2—3, linear, pinnatifid ; flowers corymbed.

HAB. Rocks. May—June. 4. *A foot high ; fl. bright yellow.*

8. *S. obovatus* : radical leaves obovate, crenate-serrate, petiolate ; cauline leaves pinnatifid, dentate ; flowers subumbellate, on long peduncles ; stem rather smooth.

HAB. Rocky woods. May—June. 4. *A foot high ; leav. thick ; fl. yell.*

491. TUSSILAGO. Colt's-foot. *Compositæ.*

1. *T. frigida* : scape fastigiate, many-flowered, bract-

teate ; leaves roundish-cordate, unequally toothed, woolly beneath.

HAB. High mountains. June. 4. *A span high ; rays wh. ; disk purp.*

2. *T. Farfara* : scape 1-flowered, scaly ; leaves cordate, angular, toothed, woolly beneath.

HAB. Banks of rivers. April. 4. *A span high ; fl. yell., appearing before the leav. ♂ ?*

492. BOLTONIA. *Compositæ.*

1. *B. glastifolia* : lower leaves serrate ; flowers on short peduncles ; seeds obcordate, conspicuously winged, pubescent ; awns of the pappus of nearly equal length.

HAB. Banks of rivers. July—Aug. 4. *Stem 2—3 ft. high ; leav. lin., altern. ; fl. flesh-col.*

2. *B. asteroides* : leaves very entire ; flowers on long peduncles ; seeds oval, smooth, scarcely awned.

HAB. Wet places. July. 4. *Stem 1—2 ft. high ; leav. alter., lanceol. ; fl. few, pink.*

493. CHRYSANTHEMUM. Ox-eye Daisy. *Compositæ.*

C. Leucanthemum : leaves amplexicaul, lanceolate, serrate, laciniate-dentate at the base ; stem erect, branching.

HAB. Fields, &c. May—Nov. 4. *Stem 12—18 in. high ; fl. large wh. ♂.*

494. VERBESINA. *Compositæ.*

V. Siegesbeckia : leaves opposite, ovate, lanceolate, acuminate at each end, acutely serrate ; panicle brachiate, irregularly many-flowered at the summit ; rays 1—3.

HAB. Dry woods. Sept. 4. *Stem 2—4 ft. high 4-wing ; leav. triply nerv. ; fl. yell.*

495. ANTHEMIS. Chamomile. *Compositæ.*

1. *A. arvensis* : receptacle conic ; chaff lanceolate ; seed crowned with a margin ; leaves lanceolate ; segments lanceolate-linear ?

HAB. Fields and waste grounds. July—Nov. ☉.
Stem much branch. ; fl. wh., disk yell. §.

2. *A. Cotula*: receptacle conic; chaff bristly; seed naked; leaves bipinnate; segments subulate, 3-parted.

HAB. Waste grounds. June—Nov. ☉. *Erect; fl. in termin. corymb. ; fl. wh. §.*

496. ACHILLEA. Milfoil. *Compositæ*.

1. *A. Ptarmica*: leaves linear, acuminate, acutely and equally serrate, smooth.

HAB. Dry swamps. Aug. 4. *Fl. white. §?*

2. *A. Millefolium*: leaves bipinnatifid, hairy; segments linear, toothed, mucronate; calyx sulcate.

HAB. Fields, &c. June—Sept. 4. *A foot high; corymb dense; fl. wh. or rose-col. §.*

497. HELIOPSIS. *Compositæ*.

H. lævis: leaves opposite, ovate, serrate, triply-nerved.

HAB. Banks of rivers. July—Aug. 4. *Stem 2 ft. high; leav. smooth; fl. large, yell.*

498. HELENIUM. False sunflower. *Compositæ*.

H. autumnale: leaves lanceolate, serrate, decurrent; flowers corymbed; florets of the disk 5-cleft, of the ray flat, reflexed.

HAB. Low meadows. Aug.—Sept. 4. *Stem 2—3 ft. high, winged; fl. yell.*

FRUSTRANEA.

499. HELIANTHUS. Sunflower. *Compositæ*.

* *Florets of the disk dark purple.*

1. *H. atrorubens*: hispid; stem naked towards the summit; loosely paniculate; leaves spatulate, oblong-ovate, crenate, triply-nerved, scabrous on the upper surface; scales of the calyx ovate-lanceolate, as long as the disk.

HAB. Dry soils. Aug.—Sept. 4. *Stem 3—4 ft. high; leav. opp., very long; rays yell.*

2. *H. angustifolius*: stem slender, slightly scabrous; leaves narrow-lanceolate, revolute on the margin, scabrous, entire, glaucous beneath; upper ones alternate; scales of the calyx linear-lanceolate, ciliate, expanding; chaff 3-toothed.

HAB. Pine barrens. Oct. 4. Stem 3—5 ft. high; branch. few; leav. 4—8 in. long; fl. small.

* * Florets of the disk yellowish.

† Leaves opposite.

3. *H. mollis*: stem smooth below, scabrous above; leaves ovate-lanceolate, acute, serrate, scabrous on the upper surface, pubescent and hoary beneath; flowers few, terminal.

HAB. Swamps. Aug. 4. Stem 3—6 ft. high; leav. very acute; fl. few; cal. hairy.

4. *H. divaricatus*: stem smooth, branched; leaves subopposite, sessile, ovate-lanceolate, triply-nerved, scabrous above, smooth beneath; panicle trichotomous, slender; flowers very small.

HAB. Rocky woods. Aug. 4. Stem 4—6 ft. high; leav. subacuminate.

5. *H. frondosus*: stem smooth below; leaves ovate, acutely serrate; peduncles scabrous; calyx squarrose, undulate, leafy, ciliate; rays 8.

HAB. Woods. Aug.—Sept. 4. Stem 4—5 ft. high; fl. small.

6. *H. trachelifolius*: leaves ovate-lanceolate, acuminate, serrate, triply-nerved, very scabrous above and beneath; scales of the calyx linear-lanceolate, ciliate, the exterior ones longer.

HAB. Rocky woods. Aug.—Sept. 4. Stem 3—4 ft. high; fl. middle-sized.

†† Upper leaves alternate.

7. *H. altissimus*: leaves alternate, ovate-lanceolate, serrate, scabrous, triply nerved, attenuate at the apex, petiolate; petioles ciliate; scales of the calyx lanceolate, ciliate.

HAB. Low grounds. Sept. 4. Stem 4—6 ft. high, purp.; rays 16; chaff green.

8. *H. giganteus*: leaves alternate, lanceolate, serrate,

scabrous, obscurely triply-nerved, subsessile, attenuate at each end, ciliate at the base; scales of the calyx lanceolate, ciliate.

HAB. Low grounds. Aug.—Sept. 4. Stem 5—6 ft. high, subscab.; pan. loose, few-fl.

9. *H. decapetalus*: leaves ovate, acuminate, remotely serrate, triply-nerved, scabrous; scales of the calyx lanceolate, subequal, subciliate; rays 10—12.

IIAB. Rocky woods. Aug. 4. Stem 4—5 ft. high; flowers large.

10. *H. multiflorus*: leaves triply-nerved, scabrous; lower ones cordate; upper ovate; rays many-flowered; scales of the calyx lanceolate.

IIAB. Rocky woods. Aug.—Sept. 4. Stem and pedunc. scab.; rays very num.

500. RUDBECKIA. *Compositæ*.

* *Calyx imbricate; chaff mucronate.*

1. *R. purpurea*: scabrous; lower leaves broad-ovate, narrowed at the base, remotely toothed; cauline ones lanceolate-ovate, nearly entire, acuminate at each end; florets of the ray very long, deflexed, bifid.

HAB. Mountains. June—July. 4. Stem 4 ft. high; fl. large; rays purp.; disk brown.

** *Calyx subequal; chaff unarmed.*

2. *R. pinnata*: leaves all pinnate; lower segments sometimes 2-parted; pappus entire; stem sulcate, hispid.

HAB. Pennsylvania. July—Oct. 4. Fl. large, yell.; rays long, reflex.; disk purp.

3. *R. digitata*: lower leaves pinnate; segments pinatifid; upper ones simple, pinnate, the highest 3-cleft; pappus crenate; stem smooth.

HAB. Mountains. Aug. 4. Stem 5—6 ft. high; leav. thin; fl. yell.; pap. subtruncate.

4. *R. laciniata*: lower leaves pinnate; segments 3-lobed; upper ones ovate; pappus crenate; stem smooth.

HAB. Swamps. Aug. 4. Stem 5—8 ft. high; lower leav. 3-foliate; fl. yell.

5. *R. triloba*: hispidly pilose; stem paniculate; branches divaricate, many-flowered, leafy; leaves lanceolate, acuminate at each end, serrate; the lower ones 3-lobed; leaflets of the calyx linear, deflexed, as long as the ray.

HAB. Mountains. Aug.—Sept. 4. Stem 4—5 ft. high; rays yell.; disk dark purp.

6. *R. fulgida*: stem hispid; branches long, virgate, 1-flowered; leaves oblong-lanceolate, denticulate, hispid, narrowed and slightly cordate at the base; calyx leafy, as long as the ray; disk hemispherical; chaff lanceolate.

HAB. Mountain meadows. Aug. 4. Stem 2—3 ft. high; rays 12—14, yell.

7. *R. hirta*: very hairy; stem virgate, somewhat branched, 1-flowered; leaves spatulate, lanceolate, triply nerved, serrate, hairy; scales of the calyx imbricate, in a triple series, shorter than the ray; chaff obovate, acute.

HAB. Mountains. Aug. 4. Stem 2—3 ft. high, subsimp.; fl. solit., yell.; rays 14.

501. BIDENS. Burr-marygold. *Compositæ*.

1. *B. cernua*: flowers subradiate, cernuous; exterior calyx as long as the flower; leaves lanceolate, subconnate, dentate.

HAB. Ditches, &c. Aug.—Oct. ☉. Stem 1—2 ft. high; rays yell., often wanting.

2. *B. minima*: leaves lanceolate, serrate, sessile; flowers erect.

HAB. Low wet places. Aug. Stem 4—8 in. high; fl. very small.

3. *B. chrysanthemoides*: flowers radiate, cernuous; rays thrice as long as the nearly equal calyx; leaves oblong, attenuate at each end, dentate, connate at the base.

HAB. Wet places. Aug.—Oct. ☉. Stem 1—3 ft. high; fl. large; rays 8, lanceol.

4. *B. frondosa*: flowers discoid; exterior calyx six times as long as the flower; its leaflets ciliate at the base; lower leaves pinnate; upper ones ternate, lanceolate, serrate.

HAB. Shady wet places. Aug. ☉. Stem 2 ft. high, branch. ; rays 0 ; seeds 2-awned.

4. *B. connata* : flowers discoid ; exterior calyx thrice as long as the flower ; cauline leaves ternate ; lateral leaflets connate ; floral ones oblong-lanceolate.

HAB. Meadows, &c. Aug.—Sept. ☉. Stem 2—3 ft. high, smooth ; leav. subglauc.

5. *B. bipinnata* : flowers subradiate ; exterior calyx as long as the interior ; leaves bipinnate ; segments linear-pinnatifid.

HAB. Fields. July—Sept. ☉. Stem 8—12 in. high ; leav. finely divid. ; rays 0, or 1—3.

6. *B. Beckii* : stem subsimple ; submersed leaves, divided into many linear and dichotomous segments ; flower erect, solitary, terminal.

HAB. Deep water. Aug. ♀ ? Stem 2—5 ft. long ; emersed leav. lanceol. or trifid ; fl. radiate.

502. COREOPSIS. Tickseed-sunflower. *Compositæ*.

* *Leaves opposite, undivided.*

1. *C. rosea* : small, very smooth ; stem simple ; leaves linear, entire ; axils leafy ; flowers few, long-pedunculate, axillary and terminal ; seeds very entire, naked.

HAB. Swamps. Aug. ♀. A foot high ; leav. subconnate ; rays 3-tooth., red.

** *Leaves opposite, divided.*

2. *C. trichosperma* : smooth ; leaves subquinate, pinnate ; segments linear-lanceolate, serrate ; flowers corymbed ; leaflets of the exterior calyx ciliate, serrate ; rays entire ; seeds cuneate, 2—4-toothed.

HAB. Cedar swamps, &c. Aug.—Sept. ♂. Stem 2 ft. high, dichot. ; rays lanceol., yell.

3. *C. tripteris* : smooth ; leaves petiolate, lanceolate, very entire ; radical ones pinnate ; of the stem ternate ; rays entire ; seeds obovate, naked at the apex.

HAB. Mountain meadows. Aug. ♀. Stem 4 ft. high, terete ; fl. small, yell.

* * * *Leaves alternate.*

4. *C. gladiata* : stem smooth, dichotomous above ; leaves narrow-lanceolate, very entire, thick, attenuated into a petiole ; seed obovate, winged ; the wings serrulate ; pappus 2-bristled.

HAB. Sphagnous swamps. Sept. ♂. Stem 2 ft. high ; rays 8, 3-tooth., yell.

5. *C. aspera* : leaves lanceolate-linear, rough ; upper ones alternate, inferior opposite ; stem 1-flowered.

HAB. Maryland.

503. ACTINOMERIS. *Compositæ.*

A? *squarrosa* : stem erect, winged, pubescent and paniculate above ; leaves lanceolate, serrate, scabrous ; calyx spreading, loose ; receptacle subglobose, at length squarrose.

HAB. Swamps. Aug. ♀. Stem 3—4 ft. high ; leav. altern. ; rays long, wh. or yell.

NECESSARIA.

504. SILPHIUM. *Compositæ.*

1. *S. ternatum* : stem terete, smooth ; leaves verticillate by threes, petiolate, lanceolate, unequally subdentate, somewhat scabrous, ciliate at the base ; upper ones scattered and sessile ; panicle dichotomous ; calyx ciliate.

HAB. Mountain meadows. July. ♀. Stem 4—6 ft. high ; fl. corymb., loose, yell.

2. *S. trifoliatum* : stem 6-angled, smooth ; leaves verticillate by threes, ovate-lanceolate, unequally toothed and serrate, scabrous ; upper ones sessile ; panicle trichotomous.

HAB. River swamps. Aug. ♀. Stem 5—6 ft. high ; lower leav. subovate ; rays 14, yell.

3. *S. perfoliatum* : stem quadrangular, smooth ; leaves opposite, connate, ovate, serrate.

HAB. Mountains. Aug. ♀. Stem 6 ft. high ; petiol. decurrent ; rays 24, yell.

505. POLYMNIA. *Compositæ*.

1. *P. canadensis*: viscid and villous; leaves denticulate, acuminate; lower ones pinnatifid; upper 3-lobed or entire.

HAB. Shady rocks. July. 4. Stem 2-3 ft. high; leav. thin; fl. in term. clusters, yell.

2. *P. Uvedalia*: leaves opposite, 3-lobed, acute, attenuate into a petiole, decurrent, the lobes angular-sinuate; rays elongate.

HAB. Fields, &c. July. 4. Stem 3—5 ft. high; leav. scab. beneath; fl. larger.

506. IVA. Bastard Jesuit's bark. *Compositæ*.

1. *frutescens*: fruticose; leaves opposite, ovate-lanceolate, deeply serrate, subscabrous; flowers depressed-globose.

HAB. Salt-marshes. Aug.—Sept. 2. Stem much branch., 3—4 ft. high; leav. thick.

SEGREGATA.

507. ELEPHANTOPUS. Elephant's-foot. *Compositæ*.

1. *E. carolinianus*: leaves of the root and stem oblong, tapering at the base, hairy; stem branched, leafy, hairy.

HAB. Dry soils. Sept. 4. Stem 2 ft. high; fl. in term. clust., purp.

GYNANDRIA.

MONANDRIA.

* Anther adnate, subterminal and persistent. Pollinia affixed by the base, composed of angular grains, elastically cohering.

508. ORCHIS. Cor. ringent; upper lip vaulted. Lip dilated, with a spur beneath. Pollinia 2, terminal, adnate.

509. HABENARIA. Cor. ringent. Lip spurred at the base beneath. Glands of the stalks of the

pollinia naked and distinct ; cells of the stalks adnate, or separated.

*** Anther persistent, parallel with the stigma. Pollinia affixed to the summit of the stigma, composed of angular grains, or farinaceous.*

510. GOODYERA. *Cor.* ringent ; the 2 lower petals placed beneath the gibbous *lip*, which is undivided at the extremity. *Column* free. *Pollen* angular.

511. NEOTTIA. *Cor.* ringent ; the 2 lower petals placed beneath the *lip*, which is beardless ; interior petals connivent. *Column* apterous. *Pollen* farinaceous.

512. LISTERA. *Cor.* irregular. *Lip* 2-lobed, pendent. *Column* apterous. *Anther* fixed by its base.

**** Anther terminal, inserted, persistent. Pollinia farinaceous or angular, affixed by the base or below the extremity.*

513. POGONIA. *Petals* 5, distinct, without glands. *Lip* sessile, cucullate, internally crested. *Pollen* farinaceous.

514. TRIPHORA. *Petals* 5, distant, equal, and connivent, without glands. *Lip* unguiculate, cucullate. *Column* spathulate, flattened, apterous. *Pollen* farinaceous.

515. CALOPOGON. *Petals* 5, distinct. *Lip* behind (or inverted,) unguiculate ; the lamina bearded. *Column* free. *Pollen* angular.

516. ARETHUSA. *Petals* 5, connate at the base. *Lip* beneath growing to the column, cucullate above, and crested internally.

***** Anther terminal, moveable, deciduous. Pollinia at length becoming waxy.*

517. TIPULARIA. *Petals* spathulate, spreading. *Lip* sessile, entire, with a conspicuous spur at the base beneath. *Column* apterous, porrected, free. *Anther* operculate, persistent ; *pollinia* 4, parallel.

518. MALAXIS. *Petals* 5, narrower than the lip spreading or deflexed. *Lip* flattened, undivided, sessile, often exterior. *Pollinia* 4, parallel with each other, fixed to the stigma by their extremities.
519. CORALLORHIZA. *Petals* equal and connivent. *Lip* mostly produced at the base. *Column* free. *Pollinia* 4, oblique, (not parallel.)
520. APLECTRUM. *Petals* equal, connivent. *Lip* unguiculate, not produced at the base. *Anther* situated below the summit of the column; *pollinia* 4, oblique, lenticular.

DIANDRIA.

521. CYPRIPEDIUM. *Lip* ventricose, inflated, saccate. *Petals* 4; the under one bifid. *Column* terminating in a petaloid lobe.

HEXANDRIA.

522. ARISTOLOCHIA. *Cal.* 0. *Cor.* 1-petalled, ligulate, with a ventricose base. *Caps.* 6-celled, many-seeded, inferior.

DODECANDRIA.

523. ASARUM. *Cal.* subcampanulate, 3—4-cleft. *Cor.* 0. *Anthers* adnate to the middle of the filaments. *Caps.* inferior, 6-celled, crowned with the calyx.

GYNANDRIA.

MONANDRIA.

508. ORCHIS. *Orchideæ.*

1. *O. spectabilis*: lip obovate, undivided, crenate, retuse; petals straight, the lateral ones longer; horn clavate, shorter than the germen; bracts longer than the flower; stem leafless.

HAB. Shady rocks. May—June. 4. *Leav. radl., large; fl. large, purp. and wh.*

2. O? *flava*: lip ovate, entire, partly crenulate; horn attenuate, filiform and about the length of the germen; spike crowded; bracts longer than the flower.

HAB. Meadows. June. 4. *Fl. pale orange-yell., rather small.*

3. O? *obsoleta*: lip oblong, lanceolate, undivided; petals erect; horn obtuse, scrotiform, as long as the germen.

HAB. Shady places. July. 4. *Bracts very short.*

4. O? *tridentata*: lip lanceolate, 3-toothed at the extremity; petals obtuse; horn filiform, clavate, ascending, longer than the germen.

HAB. Swamps. July. 4. *Stem 1—2 ft. high, slend.; fl. small, gr.-white.*

509. HABENARIA. *Orchideæ.*

1. H. *ciliaris*: lip oblong-lanceolate, pinnately ciliate, twice as long as the petals; horn longer than the germen.

HAB. Swamps. Aug. 4. *Stem 2 ft. high; spike dense; fl. bright orange.*

2. H. *blephariglottis*: lip lanceolate, ciliate, as long as the upper petal; horn much longer than the germen.

HAB. Swamps. July. 4. *Stem 2 ft. high; fl. pure white.*

3. H. *cristata*: lip oblong, pinnately ciliate; petals rounded; the two lateral ones toothed; horn shorter than the germen.

HAB. Swamps. July. 4. *Leav. lanceol.; fl. crowded, rather small, yell.*

4. H. *psycodes*: lip 3-parted; segments finely divided; petals obtuse; horn filiform-clavate, ascending, longer than the germen.

HAB. Swamps. July—Aug. 4. *Spike long; fl. middle sized, greenish-wh.*

5. H. *integra*: lip oblong, entire, longer than the inner petals; spur longer than the germen, acute

at the point ; stem leafy ; bracts shorter than the flowers.

HAB. Swamps. July. 4. *Flowers orange yell., smaller than in No. 1.*

6. *H. huronensis* : lip lanceolate, acuminate, entire, and incurved ; petals subulate and connivent ; spur about the length of the lip, incurved ; petals flat ; stem leafy.

HAB. Wet meadows. Aug. 4. *Stem 1—2 ft. high ; spike dense, long ; fl. greenish, small.*

7. *H. dilatata* : lip linear, very entire, rather obtuse, rounded and dilated at the base ; horn as long as the lip, shorter than the germen ; bracts as long as the flower ; stem leafy.

HAB. Mountain woods. July. 4. *Stem 2—4 ft. high, very thick ; fl. gr. or wh.*

8. *H. fuscescens* : lip ovate, toothed at the base ; petals spreading ; horn subulate, as long as the germen ; bracts longer than the flower.

HAB. Mountain meadows. July. 4. *Stem thick ; spike long ; fl. purp.-yell.*

9. *H. herbiola* : lip oblong, obtuse, toothed at the base ; palate 1-toothed ; horn filiform, shorter than the germen ; bracts longer than the flower.

HAB. Swamps. June. 4. *Stem 1 ft. high ; fl. small, yellowish.*

10. *H. bracteata* : lip linear, emarginate, and obscurely 3-toothed at the extremity ; petals subconnivent ; lateral ones ovate and broader ; horn obtuse, scrotiform ; bracts spreading, twice as long as the flower ; leaves subovate or oblong.

HAB. Shady woods, &c. June. 4. *Stem 8—12 in. high, leafy ; spike loose ; fl. green.*

11. *H. orbiculata* : lip linear, very entire, obtuse ; the 3 upper petals connivent ; the 2 lateral ones spreading, oblique at the base ; horn longer than the germen ; scape with 2 orbicular leaves at the base.

HAB. Wet meadows. June. 4. *Scape 12—18 in. high ; leav. very large ; fl. loose, gr.-white.*

12. *H. macrophylla* : lip lanceolate, entire, acuminate ; spur longer than the germen, terete, nearly

straight ; upper petals ovate, acute ; scape with 2 broad-oval suberect leaves at the base.

HAB. Meadows. June. 4. *Stem 1 ft. high ; leav. large ; fl. gr.-yell.*

13. *H. fimbriata* : lip 3-parted, scarcely longer than the petals ; segments cuneiform, ciliate-fimbriate ; lateral petals ovate, fimbriate-toothed ; horn filiform, clavate, longer than the germen.

HAB. Meadows. July. 4. *Stem 2 ft. high ; fl. large, beautiful purp.*

14. *H. grandiflora* : lip dependent, twice as long as the petals, 3-parted ; segments cuneiform, fimbriate, the middle one largest, with the fimbriæ connivent ; lateral petals fimbriate ; spur ascending, clavate, longer than the germen ; leaves oval-oblong.

HAB. Wet meadows. June. 4. *Stem 2 ft. high, thick ; fl. very large, purp.*

15. *H. incisa* : lip 3-parted ; segments cuneiform, incisely toothed, the intermediate one emarginate ; lateral petals obtuse, subdentate ; horn subulate, ascending, longer than the germen.

HAB. Meadows. July. 4. *Stem 2—4 ft. high ; fl. purple.*

16. *H. fissa* : lip 3-parted ; segments cuneiform, dentate ; intermediate one 2-lobed : horn filiform, clavate at the extremity, ascending, longer than the germen.

HAB. Mountain meadows. July. 4. *Stem tall ; fl. dark purple.*

510. GOODYERA. *Orchidæ.*

1. *G. pubescens* : radical leaves ovate, petiolate, reticulate ; scape sheathed, and with the flowers pubescent ; lip ovate, acuminate ; petals ovate.

HAB. Woods. July—Aug. 4. *Leav. radical, dark green with wh. veins ; fl. wh.*

2. *G. repens* : radical leaves ovate, petiolate, reticulate ; scape sheathed, and with the flowers pubescent ; flowers unilateral ; lip and petals lanceolate.

HAB. Woods. July. 4. *Scape 8 in. high ; leav. small ; fl. gr.-wh.*

1 . NEOTTIA. Ladies' tresses. *Orchideæ*.

1. *N. tortilis* : radical leaves linear ; scape sheathed ; flowers spirally secund ; lip somewhat 3-lobed, the middle lobe larger and crenulate.

HAB. Meadows and woods. July. 4. *Scape* *slend.*, 12 in. high ; *fl. num.*, *wh.* ; *root fascic.*

- β. *gracilis* : radical leaves ovate, caducous, membranaceous.

HAB. Dry woods. *Scape very* *slend.*, *smooth.*

2. *N. cernua* : leaves linear-lanceolate, nerved ; stem sheathed ; spike densely flowered ; flowers recurved-drooping ; lip oblong, entire, acute.

HAB. Boggy grounds. Aug.—Oct. 4. *Stem* 3—12 in. high, *pubes. above* ; *fl. gr.-wh.*

- β. *major* : stem tall, somewhat leafy ; flowers very large.

HAB. Woods. Sept. *Stem* 2 ft. high ; *fl.* 3 times as large as in the common variety.

- γ ? *latifolia* : stem short ; leaves oblong-lanceolate, subradical, flat.

HAB. Mountain meadows. *Stem* 4—8 in. high ; *leav. broad* ; *lip ovate, obtuse.*

512. LISTERA. Tway-blade. *Orchideæ*.

1. *L. cordata* : stem with only 2 opposite roundish-cordate ; raceme loose ; column without any appendage behind ; lip elongate, 2-toothed at base, deeply bifid ; the segments subdivaricate and acute.

HAB. Sphagnous swamps. May. 4. *Stem* 4—8 in. high ; *raceme* 7—15-fl. ; *fl. minute, gr.-purp.*

2. *L. ? convallarioides* : stem with only 2 opposite oval-roundish leaves, pubescent above ; raceme few-flowered (4—6) ; column porrected ; lip oblong, dilated, and obtusely 2-lobed at the extremity.

HAB. Swamps. 4. *Stem* 6 in. high, *slend.* ; *fl. much larger than in No. 1.*

513. POGONIA. *Orchideæ*.

1. *P. ophioglossoides* : root fibrous ; scape furnished

with an oval-lanceolate leaf and a foliaceous bract near the flower ; lip fimbriate.

HAB. Swamps. July. 4. *Root fascic. ; scape 1 ft. high ; fl. solit., large, purp.*

2. *P. verticillata* : leaves 5, oblong-lanceolate, verticillate ; flower solitary ; the 3 exterior petals very long, linear ; interior shorter, oblong, obtuse ; lip 3-lobed, middle segment undulate.

HAB. Swamps. July. 4. *Stem 8—12 in. high ; leav. term. ; ext. pet. greenish-brown.*

514. TRIPHORA. *Orchideæ.*

- T. pendula* : root tuberous ; stem leafy, about 3-flowered at the summit ; leaves ovate, alternate ; flowers pedunculate ; peduncles at length recurved.

HAB. Rocky woods. Sept. 4. *Stem a span high, succul. ; fl. purp.*

515. CALOPOGON. *Orchideæ.*

- C. pulchellus* : radical leaves ensiform ; scape few-flowered.

HAB. Swamps. July. 4. *Stem 1 ft. high ; fl. 3—4, large, purp. ; root bulb.*

516. ARETHUSA. *Orchideæ.*

- A. bulbosa* : leafless ; root bulbous ; scape sheathed, 1-flowered.

HAB. Swamps. June. 4. *Stem 8—12 in. high ; fl. solit., large, purp.*

517. TIPULARIA. *Orchideæ.*

- T. discolor.*

HAB. Pine barrens. July. *Root bulb. ; leaf solit., ovate, petiol., plicate ; fl. racem., few, nodding, greenish.*

518. MALAXIS. *Orchideæ.*

1. *M. liliifolia* : leaves 2, ovate-lanceolate ; scape triangular ; interior petals filiform, reflexed ; lip concave, obovate, acute at the tip.

HAB. Woods and swamps. June. 4. *Leav. large, rad.; scape 6—10 in. high; fl. gr.-white.*

* *Subgenus. MICROSTYLIS.*

Lip sessile and concave, erect, the summit truncate and bidentate; *column* minute; *anthers* 2; *pollinia* 3.

2. *M. ophioglossoides*: leaf solitary, ovate, amplexicaul; stem pentagonal.

HAB. Swamps. June. 4. *Stem a span high, with 1 leaf; fl. minute, gr.-white.*

519. CORALLORHIZA. Dragon's claw. *Orchideæ.*

1. *C. verna*: petals linear-lanceolate, spreading; lip oblong, without spots, bidentate at the base; apex recurved, ovate; spur obsolete, adnate.

HAB. Sphagnous swamps. May. 4. *Leafless; root coralloid; scape 5—6 in. high; fl. small, yellow-gr.*

2. *C. odontorrhiza*: lip oval, undivided, obtuse, spotted; spur obsolete, adnate; capsule subglobose.

HAB. Shady woods. Aug.—Sept. 4. *A foot high, leafless, sheathed; fl. purplish.*

3. *C. multiflora*: scape many-flowered (15—30); lip cuneate-oval, 3-parted, recurved, spotted; spur conspicuous, adnate.

HAB. Shady woods. Aug.—Sept. *Scape 12—15 in. high; fl. purp. and spotted.*

520. APLECTRUM. *Orchideæ.*

A. hyemale.

HAB. Woods. May. 4. *Root bulb.; leaf solit., ovate, striate; scape 12 in. high, vagin.; fl. gr.-purp.; lip 3-cleft, not spotted.*

DIANDRIA.

521. CYPRIPIEDUM. Ladies' slipper. *Orchideæ.*

1. *C. candidum*: stem leafy; leaves oblong-lanceolate; lobe of the style lanceolate, rather obtuse; lip shorter than the lanceolate petals, compressed.

HAB. Pennsylvania. May. 4. *Fl. wh. Resembles C. Calceolus,*

2. *C. parviflorum*: stem leafy; lobe of the style triangular, acute; exterior petals ovate-oblong, acuminate, interior linear and contorted; lip shorter than the petals, compressed.

HAB. Woods. May—June. 4. *Pet. gr.-brown; lip yell., spotted.*

3. *C. pubescens*: stem leafy; lobe of the style triangular-oblong, obtuse; exterior petals ovate-oblong, acuminate; interior very long, linear, contorted; lip shorter than the petals, compressed.

HAB. Meadows and woods. May—June. 4. *Stem 1—3 ft.; fl. gr.-yell, spotted; leav. pubes.*

4. *C. spectabile*: stem leafy; lobe of the style elliptical-cordate, obtuse; exterior petals broad-oval, obtuse; lip longer than the petals, cleft before.

HAB. Swamps. June. 4. *Stem 2—3 ft. high; 2—3 fl., thick; lip wh. and purp.*

5. *C. arietinum*: stem leafy; lobe of the style orbicular; petals 5, the 2 lower ones linear-lanceolate, deflexed; the 2 lateral linear, spreading; upper one oblong-ovate, acute; lip as long as the petals, inversely conical.

HAB. Wet woods. May. 4. *Stem 6—8 in. high; fl. small; pet. gr.-brown; lip. retic.*

6. *C. acaule*: scape leafless, 1-flowered; radical leaves 2, oblong, obtuse; lobe of the style roundish-rhomboidal, acuminate, deflexed; petals lanceolate; lip shorter than the petals, cleft before.

HAB. Woods. May—June. 4. *Scape 1 ft. high; fl. very large; lip purp.*

HEXANDRIA.

522. ARISTOLOCHIA. Birthwort.

1. *A. Siphon*: leaves cordate, acute; stem twining; peduncles 1-flowered, furnished with an ovate bract; corolla ascending, the border 3-cleft and equal.

HAB. Mountains. June. 12. *Stem long; leav. very large; cor. long, dark purp.*

2. *A. Serpentaria*: leaves cordate, oblong, acuminate; stem flexuous; peduncles radical; lip of the corolla lanceolate.

HAB. Shady woods. June. 4. *Root fibr.; stem*
8—10 in. high, genic.; *fl. purp.*

DODECANDRIA.

523. ASARUM. Indian ginger.

1. *A. canadense*: leaves broad-reniform, geminate;
calyx woolly, deeply 3-parted; the segments sub-
lanceolate, reflexed.

HAB. Shady rocks. May—June. 4. *Leav. long-*
petiol., pubes.; fl. axill., pendul., solit.

2. *A. virginicum*: leaves solitary, roundish-cordate,
smooth and coriaceous; flower subsessile; calyx
short-campanulate, smooth externally.

HAB. Rocky woods. April. 4. *Leav. very*
smooth; seg. of cal. obtuse.

MONOECIA.

MONANDRIA.

524. ZOSTERA. Stam. and pist. inserted in 2 rows
upon one side of a spadix. *Spath* foliaceous.
STERILE FL. *Anth.* ovate, sessile, alternating
with the germen. FERTILE FL. *Germ.* ovate.
Style bifid. *Drupe* with 1 seed.
525. CAULINIA. STERILE FL. *Perianth* 0. *Anth.*
sessile. FERTILE FL. *Perianth* 0. *Style* fili-
form; *stigma* bifid. *Caps.* 1-seeded.
526. ZANNICHELLIA. STERILE FL. *Perianth* 0.
FERTILE FL. *Cal.* 1-leaved. *Cor.* 0. *Style*
1; *stigma* peltate. *Capsules* about 4, sessile.
527. EUPHORBIA. *Involucrum* resembling a calyx,
ventricose, the alternate segments (*petals* L.
nectaries?) petaloid. STERILE FL. 12 or more,
mostly simple, each consisting of an anther with
its filament articulated to a pedicel, (coming to
maturity successively.) *Cal.* and *Cor.* very
rarely present. FERTILE FL. solitary, central,
stipitate. *Cal.* and *Cor.* 0. *Styles* 3, 2-cleft.
Caps. 3-lobed.

DIANDRIA.

528. **PODOSTEMUM.** STERILE FL. *Perianth* 0. *Stam.* 2, affixed to a common pedicel. FERTILE FL. *Germ.* ovate; *stig.* 1, sessile. *Caps.* 2-celled, 2-valved, many-seeded. *Seeds* minute.

TRIANDRIA.

529. **TYPHA.** *Ament* cylindrical, dense. STERILE FL. *Perianth* 0. *Stam.* 3 together, upon a chafy or hairy receptacle, united below into 1 filament. FERTILE FL. below the sterile. *Perianth* 0. *Pericarp* pedicellate, surrounded with a hairy pappus at the base.
530. **SPARGANIUM.** *Ament* globose. STERILE FL. *Cal.* 3-leaved. FERTILE FL. *Cal.* 3-leaved. *Drupe* dry, 1—2-seeded.
531. **CAREX.** *Flowers* collected into an imbricate *ament.* *Glume* 1-flowered. *Cor.* ventricose, 1-valved, persistent, including the *caryopsis.*
532. **SCLERIA.** STERILE FL. *Cal.* 2- or 6-glumed, many-flowered. Valves of the *Cor.* unarmed. FERTILE FL. *Cal.* 2 or 6 glumed, 1-flowered. *Cor.* 0. *Stig.* 1—3. *Nut* coloured, subglobose.
533. **TRIPSACUM.** STERILE FL. *Glume* 2-flowered; the exterior flower sterile, the interior neuter. Valve of the *Cor.* membranaceous. FERTILE FL. *Glume* 2-flowered; exterior valve resembling an involucre, perforate near the base. *Cor.* 2-valved. *Styles* 2. *Seed* 1.
534. **COMPTONIA.** STERILE FL. *Ament* cylindric; scales 1-flowered. *Cor.* 0. FERTILE FL. *Ament* ovate. *Cal.* at length 6-leaved. *Cor.* 0. *Styles* 2. *Nut* oval, 1-celled.

TETRANDRIA.

535. **ERIOCAULON.** *Flowers* collected into a compact scaly head. STERILE FL. in the disk. *Perianth* single, 4-cleft; the 2 inner segments

- united nearly to their summit. *Stam.* 4—6. FERTILE FL. in the margin. *Perianth* single, deeply 4-parted. *Style* 1. *Stig.* 2—3. *Caps.* 2—3-lobed, 2—3-celled ; cells 1-seeded.
536. ALNUS. STERILE FL. *Ament* composed of 3-flowered, cuneiform truncate receptacles. *Cal.* the scales of the ament, 3-lobed. *Cor.* 4-parted. FERTILE FL. *Scales* of the ament 2-flowered, subtrifid. *Cor.* 0. *Seed* compressed, wingless.
537. BOEHMERIA. STERILE FL. *Cal.* 4-parted. *Cor.* 0. *Nectary* 0. FERTILE FL. *Cal.* and *Cor.* 0. *Seed* 1, compressed.
538. URTICA. STERILE FL. *Cal.* 4-leaved. *Cor.* 0. *Nectary* (abortive germen?) central, mostly cyathiform. FERTILE FL. *Cal.* 2-leaved. *Pericarp* 1 seeded, shining.
539. PARIETARIA. *Flowers* polygamous. PERFECT. *Cal.* 4-cleft. *Cor.* 0. *Stam.* elastic. *Style* 1. *Seed* 1, superior. FERTILE. *Cal.* 2-leaved. *Seed* covered by the dry and elongated calyx.
540. MORUS. STERILE FL. *Cal.* 4-parted. *Cor.* 0. FERTILE FL. *Cal.* 4-leaved, becoming a berry. *Cor.* 0. *Styles* 2. *Seeds* solitary.

PENTANDRIA.

541. CROTONOPSIS. STERILE FL. *Cal.* 5-parted. *Cor.* 5-petalled. FERTILE FL. *Cal.* 5-parted. *Cor.* 0. *Stig.* 3, twice bifid. *Cap.* 1-seeded
542. AMARANTHUS. STERILE FL. *Cal.* 3—5-leaved. *Cor.* 0. *Stam.* 3—5. FERTILE FL. *Cal.* 3—5 leaved. *Cor.* 0. *Styles* 3. *Caps.* 1-celled, opening transversely all round. *Seed* 1.
543. XANTHIUM. STERILE FL. *Cal.* imbricate. *Anthers* approximate, but not united. *Recept.* palaceous. FERTILE FL. *Cal.* a 2-leaved involucre, 1-flowered. *Cor.* 0. *Drupe?* dry, muricate, 2-cleft. *Nut* 2-celled.
544. AMBROSIA. STERILE FL. *Cal.* 1-leaved. *Anth.* approximate, but not united. *Recept.* naked. FERTILE FL. *Cal.* 1-leaved, entire or 5-toothed, 1-flowered. *Cor.* 0. *Nut* formed from the indurated calyx, 1-seeded.

HEXANDRIA.

545. ZIZANIA. STERILE FL. *Cal.* 0. *Cor.* 2-valved, subawned. FERTILE FL. *Cal.* 0. *Cor.* 2-valved, cucullate, awned. *Style* 2-parted. *Seed* 1, invested by the corolla.
546. HYDROCHLOA. STERILE FL. *Cal.* 0. *Cor.* 2-valved, awnless. FERTILE FL. *Cal.* 0. *Cor.* 2-valved, awnless. *Stig.* 2, very long. *Seed* 1, reniform.

POLYANDRIA.

547. CERATOPHYLLUM. STERILE FL. *Cal.* many-parted. *Cor.* 0. *Stam.* 16—20; *anth.* tricuspidate. FERTILE FL. *Cal.* many-parted. *Cor.* 0. *Stig.* nearly sessile, oblique. *Nut* 1-seeded.
548. MYRIOPHYLLUM. STERILE FL. *Cal.* 4-cleft. *Petals* 4, caducous. *Stam.* 4, 6, or 8. FERTILE FL. *Cal.* 4-leaved. *Petals* 4. *Stig.* 4, pubescent; *styles* 0. *Nuts* 4, subglobose, 1-seeded.
549. SAGITTARIA. STERILE FL. *Cal.* 3-leaved. *Pet.* 3. *Stam.* definite. FERTILE FL. *Cal.* 3-leaved. *Pet.* 3. *Germens* numerous. *Pericarps* aggregated, 1-seeded, not opening.
550. QUERCUS. STERILE FL. in a loose ament. *Cal.* mostly 5-cleft. *Cor.* 0. *Stam.* 5—10. FERTILE FL. *Involucrum* cup-shaped, scaly. *Cal.* incorporated with the germen, 6-lobed. *Germen* 3-celled; 2 of the cells abortive. *Style* 1; *stig.* 3-5. *Nut* (acorn) 1-celled, coriaceous, 1 seeded, surrounded at the base by the enlarged cup-shaped involucrum.
551. CORYLUS. STERILE FL. in a cylindrical ament, its scales 3-cleft. *Perianth* 0. *Stam.* 3; *anth.* 1-celled. FERTILE FL. *Cal.* obsolete. *Germ.* several; *stig.* 2. *Nut* ovate, surrounded with the enlarged coriaceous and scaly involucrum.
552. FAGUS. STERILE FL. in a globose ament. *Cal.* 5—6-cleft, campanulate. *Stam.* 5—12. FERTILE FL. 2. *Involucrum* 4-lobed, prickly. *Cal.* single, 4—5-cleft. *Styles* 3. *Nut* 1-seeded, inclosed in the enlarged echinate involucrum.

553. **CASTANEA.** STERILE FL. in a long, naked cylindrical *ament*. *Cal.* 1-leaved, 6-cleft. *Stam.* 10—12. FERTILE FL. 3. *Involucrum* 4-lobed, thickly muricate. *Cal.* 5—6-lobed. *Styles* 6. *Nut* mostly 1-seeded, invested with the enlarged *involucrum*.
554. **BETULA.** STERILE FL. in a cylindrical *ament*; scales peltate, 3-flowered. *Cal.* 0. *Cor.* 0. *Stam.* 10—12. FERTILE FL. *Scales* of the *ament* 3-flowered. *Cal.* 0. *Cor.* 0. *Styles* 2. *Nuts* compressed, with a broad-winged margin, 1-seeded.
555. **CARPINUS.** STERILE FL. in a cylindrical *ament*; scales ciliate. *Stam.* about 10. FERTILE FL. in a loose *ament*; scales large, 3-lobed, 1—2-flowered. *Cal.* 3-cleft. *Styles* 2. *Nut* ovate, sulcate, 1-seeded.
556. **OSTRYA.** STERILE FL. in a cylindrical *ament*; scales 1-flowered. *Cal.* 0. *Filaments* branched. FERTILE FL. *Ament* naked. *Cal.* 0. *Cor.* 0. *Caps.* inflated, imbricate, 1-seeded at the base.
557. **PLATANUS.** *Flowers* in globose *aments*. STERILE. *Cal.* 0. *Cor.* minute. *Anth.* adnate to the filaments from the base. FERTILE. *Cal.* many-parted. *Cor.* 0. *Stig.* recurved. *Caps.* subclavate, 1-seeded, mucronate with the persistent style; base surrounded with a hairy pappus.
558. **LIQUIDAMBAR.** STERILE FL. in a conic *ament*, surrounded with a 4-leaved *involucrum*. *Cal.* and *Cor.* 0. *Filam.* numerous. STERILE FL. *Ament* globose, surrounded with a 4-leaved *involucrum*. *Cal.* 1-leaved, urceolate, 2-flowered. *Styles* 2. *Capsules* 2, surrounded by the base of the calyx, 1-celled, many-seeded.
559. **JUGLANS.** STERILE FL. *Ament* imbricate; the scales mostly 5-parted. *Cal.* about 5-parted. *Stam.* 20—30. FERTILE FL. *Cal.* 4-cleft, superior. *Cor.* 4-parted. *Styles* 1—2. *Drupe* partly spongy; *nut* rugose and irregularly furrowed.
560. **CARYA.** STERILE FL. *Ament* imbricate; scales 3-parted. *Cal.* and *Cor.* 0. *Stam.* 4—6. FER-

- TILE FL. *Cal.* 4-cleft, superior. *Cor.* 0. *Styles* 0; *stig.* subdiscoid, 4-lobed. *Pericarp* 4-valved. *Nut* subquadrangular, even.
561. ARUM. *Spathe* 1-leaved, cucullate. *Cal.* and *Cor.* 0. *Spadix* naked above, bearing sessile *anthers* below the middle, and *germens* at the base. *Berry* 1-celled, many-seeded.
562. LECONTIA.* *Spathe* convolute. *Cal.* and *Cor.* 0. *Spadix* covered with flowers, fertile at the base, sterile above. *Berry* 1-seeded.
563. CALLA. *Spath* ovate, somewhat flattened. *Spadix* covered with flowers; barren and fertile imixed. *Cal.* and *Cor.* 0. *Berry* many-seeded.

MONADELPHIA.

564. PINUS. STERILE FL. *Scales* peltate. *Cal.* and *Cor.* 0. *Anth.* 2, sessile, 1-celled. FERTILE FL. in an ovate or conical strobile; scales closely imbricate, 2-flowered. *Cor.* 0. *Nut* winged, covered by the scales of the cone.
565. THUJA. STERILE FL. *Ament* imbricate. *Cal.* and *Cor.* 0. *Anth.* sessile, 4. FERTILE FL. 0. *Strobile* with the scales 2-flowered. *Cor.* 0. *Nut* 1, winged.
566. CUPRESSUS. STERILE FL. in an ovate *ament*; scales peltate. *Cal.* and *Cor.* 0. *Anth.* 4, sessile. FERTILE FL. *Strobile* with the scales peltate. *Cal.* and *Cor.* 0. *Germens* 4—8 under each scale of the strobile. *Nuts* angular, compressed.
567. ACALYPHA. STERILE FL. *Cal.* 3—4-parted. *Cor.* 0. *Stam.* 8—16. FERTILE FL. *Cal.* 3-leaved. *Cor.* 0. *Styles* 3. *Caps.* 3-celled. *Seed* 1 in each cell.
568. PHYLLANTHUS. STERILE FL. *Cal.* 5—6-parted. *Filam.* often columnar; *anth.* 3. FERTILE FL. resembling the sterile. *Nectary* a 12-angled margin. *Styles* 3. *Caps.* mostly 3-grained.
569. MELOTHRIA. STERILE FL. *Cal.* 1-leaved, 3—

* A new genus proposed by Mr. W. Cooper, and named in honour of Capt. Leconte of the U. S. A.

5-toothed. *Cor.* campanulate. *Stam.* 3, growing to the tube of the corolla. FERTILE FL. *Cal.* and *Cor.* as in the sterile. *Germen* inferior; *style* 1; *stig.* 3. *Berry* 3-celled, many-seeded.

570. MOMORDICA. STERILE FL. *Cal.* 5—6-cleft. *Cor.* 5—6-parted. *Filam.* 3. FERTILE FL. *Style* 3-cleft. *Pepo* dry, bursting elastically.

571. SICYOS. STERILE FL. *Cal.* 5-toothed. *Cor.* 5-parted. *Filam.* 3. FERTILE FL. *Style* 3-cleft. *Pepo* 1-seeded.

MONOECIA.

MONANDRIA.

524. ZOSTERA. Grass-wrack. *Fluviales.*

Z. marina: leaves entire, somewhat 3-nerved; stem roundish.

HAB. Sea shore. *Leav.* linear, 3-4 lin. broad, 2—4 ft. long; *spad.* lin., sheath.

525. CAULINIA. *Fluviales.*

1. *C. flexilis*: leaves verticillate by sixes, linear, denticulate at the extremity, spreading.

HAB. Flowing water. Aug.—Sept. 4? *Stem* submerg., *branch.*; *fl. axill.*, *sess.*

2. *C. fragilis*: leaves by threes, or opposite, linear-subulate, recurved, with aculeate dentures, rigid.

HAB. Ditches, &c. Aug. *Stem* long, brittle, submerg.

526. ZANNICHELLIA. Horned pondweed. *Fluviales.*

1. *Z. palustris*: anther 4-celled; stigmas entire; pericarps toothed on the back.

HAB. Ditches, &c. ☉. *Stem* long, filif.; *leav.* oppos., lin.; *fl. axill.*, small.

2. *Z. intermedia**: anther 2-celled; stigmas dentate-crenate; seed smooth, entire on the back.

HAB. Salt marsh ditches. July. ☉. *Submerged; stem filif.; leav. entire; fl. inconspic.*

527. EUPHORBIA. Spurge. *Euphorbiaceæ.*

1. *E. hypericifolia*: smooth, branched, erect-spreading; branches divaricate; leaves opposite, serrate, oval-oblong, subfalcate, on very short petioles; corymbs terminal and axillary.

HAB. Fields and dry soils. July—Aug. ☉. *Very smooth, 12—18 in. high; leav. spot.*

- ♂ ? *hirsuta*: stem slender, hairy; leaves oblong, smooth, serrulate.

HAB. Sandy soils. Aug. *Much branch., 8—12 in. high; stem purp.*

2. *E. maculata*: stem procumbent, spreading flat on the ground, much branched, hairy; leaves opposite, oval or oblong, serrulate, oblique at the base, on short petioles, smooth above, hairy and pale beneath; flowers solitary, axillary, much shorter than the leaves.

HAB. Sandy fields. July—Oct. ☉. *Stem 6—12 in. long; fl. appearing fascic.*

3. *E. polygonifolia*: procumbent, divaricate, very smooth, succulent; leaves oblong and linear-lanceolate, entire, obtuse at the base, sometimes subcordate; flowers solitary in the forks of the stem; stipules simple.

HAB. Sea shore. July—Sept. 4. *Stem 8 in. long; stip. subul.; fl. minute.*

4. *E. Ipecacuanha*: procumbent or suberect, very smooth; leaves opposite obovate and lanceolate; peduncles axillary, 1-flowered, elongated.

HAB. Pine barrens. May—June. 4. *Root tapering, very long; leav. variable, ellipt., obovate, or linear, (in young plants broad.)*

5. *E. corallata*: umbel 5-cleft, 3-cleft, and dichotomous; floral and cauline leaves oblong, obtuse, alternate dentures of the involucre petaloid, obovate.

HAB. Fields, &c. June. 4. *Stem 1—2 ft. high, erect, subsimp.; fl. conspic.*

6. *E. portulaccoides*: erect, leaves entire, oval, re-

tuse ; peduncles axillary, 1-flowered, as long as the leaves.

HAB. Sandy soil. 4. A variety of the preceding?

7. *E. Peplus* : umbel 3-cleft, dichotomous ; floral leaves ovate, of the stem obovate, very entire, petiolate.

HAB. Sandy soil. July. ☉. *Flor. leaves large ; fl. conspic.*

8. *E. obtusata* : umbel 3-rayed, twice dichotomous ; floral leaves ovate, rather obtuse, subcordate ; of the stem alternate, sessile, spathulate, serrulate, smooth ; capsule muricate.

HAB. Fields. July. 4. *Stem 12—18 in. high, smooth, subsimple below.*

9. *E. mercurialina* : stem slender and weak, simply 3-cleft ; leaves opposite and ternate, subsessile, oval, entire ; peduncles terminal, solitary, 1-flowered.

HAB. Shady rocks. July—Aug. 4.

10. *E. pilosa* : umbel of 5 primary rays and bifid ; floral leaves ovate ; cauline lanceolate, somewhat hairy, serrulate at the extremity ; petaloid segments of the involucre entire.

HAB. Woods, &c. June—July. 4. *Stem 1—2 ft. high.*

11. *E. dentata* : hairy ; leaves opposite, oval, dentate ; flowers crowded at the summit of the stem.

HAB. Shady rocks. July—Aug. ☉. *Upper leav. spotted.*

12. *E. helioscopia* : umbel of 5 primary rays and bifid ; floral leaves obovate ; cauline cuneiform serrate.

HAB. Rich soil. ☉. *Stem erect ; leav. scattered : caps. smooth.*

DIANDRIA.

528. PODOSTEMUM. *Fluviales.*

P. ceratophyllum.

HAB. Rocks, in streams. July. 4. *Stem filif. float ; leav. pinnate ; fl. axill.*

TRIANDRIA.

529. TYPHA. Reed-mace. *Aroideæ*.

1. *T. latifolia*: leaves linear; sterile and fertile spikes approximate on the same rachis, both cylindrical.

HAB. Water. June—July. 4. Culm 5 ft. high; spikes dense; leav. 1 in. broad.

2. *T. angustifolia*: leaves linear, canaliculate, semi-cylindric below and flattish above; sterile and fertile spikes a little separate.

HAB. Water. June—July. 4. Culm 4—5 ft. high; leav. 5-6 lin. broad.

530. SPARGANIUM. Burr-reed. *Aroideæ*.

1. *S. ramosum*: leaves triangular at the base, their sides concave; common flower stalk branched; stigma linear.

HAB. Borders of lakes, &c. Aug.—Sept. 4. Two ft. high; leav. ensif., long.

2. *S. americanum*: lower leaves equal with, or exceeding the stem, which is nearly simple; floral ones concave at the base and erect; stigma simple, ovate-oblong, oblique, scarcely more than half the length of the style.

HAB. Lakes. Aug. 4. Stem 12 in. high; lower leav. carinate; fertile heads 2—5.

3. *S. natans*: leaves long, flat, floating; common flower-stalk simple; stigma ovate, very short; head of sterile flowers subsolitary.

HAB. Lakes. Aug. 4. Stem long, slend.; leav. very narrow, linear, thin.

531. CAREX.^a Sedge. *Cyperoideæ*.

A. Inflorescence dioecious.

1. *C. sterilis*: spikes dioecious; sterile 3—5; fertile about 6, (sometimes androgynous;) fruit ovate,

^a For full descriptions of the species enumerated below, see the Monograph of North American Carices, by Rev. Mr. Schweinitz and myself, in the Annals of the Lyceum of Nat. History.

compressed, triquetrous; margin ciliate-serrate; apex recurved and bicuspidate.

HAB. Marshes. May. 4. Culm 8—12 in. high; spik. subapprox., oblong.

B. Inflorescence monoecious.

* All the spikes androgynous.

† Spike solitary.

a. Summit staminiferous.

2. *C. Fraseri*: spike simple, ovate; fruit ovate-subglobose, entire at the point, longer than the oblong glume; leaves lanceolate, undulate, crenulate; scape sheathed at the base.

HAB. Mountains. April. 4. Leav. broad, radical.

3. *C. Willdenovii*: spike simple, ovate; sterile and fertile flowers about 6; fruit ovate, subglobose at the base, rostrate; glumes ovate, acuminate, the inferior ones very long and foliaceous, much exceeding the culm.

HAB. Rocky woods. May—June. 4. Culm a span high; inf. glum. 1—2 in. long.

4. *C. polytrichoides*: spike simple; fruit oblong-lanceolate, compressed triquetrous, obtuse, emarginate; glumes oblong-obtuse, mucronate.

HAB. Dry hills and bogs. May. 4. Culm a foot high, very slend.; leav. narrow-linear.

5. *C. pauciflora*: spike about 4-flowered; sterile flower subsolitary, terminal; fruit lanceolate, terete, reflexed; fertile glumes caducous.

HAB. Sphagnous bogs. June. 4. A span high; fr. long., yell., caduc.

b. Summit pistilliferous.

6. *C. squarrosa*: spike mostly simple, (sometimes spikes 2—3,) very thick, oblong-cylindrical; fruit imbricate, at length horizontal, smooth, subsquarrose, bidentate at the point, longer than the lanceolate glume.

HAB. Bogs. June. 4. Culm 2 ft. high; spike $\frac{3}{4}$ in. long, $\frac{1}{2}$ in. thick.

* * *Spikes several, aggregated into a head.*

7. *C. cephalophora* : spikes collected into an elliptical head ; fruit ovate, scabrous on the margin above, about equal to the ovate subaristate glume.

HAB. Hills. May. 4. Culm 1—2 ft. high, *cespit.*, wiry ; head *subtrifid*.

* * * *Spikes distinct, (not aggregated into a head.)*

a. *Summit staminiferous.*

1. *With 2 stigmas.*

3. *C. bromoides* : spikes 4—6, alternate, oblong, erect, uppermost one sterile above, the rest pistilliferous or androgynous (sterile above and below ;) fruit erect, lanceolate acuminate, scabrous, nerved, bifid, longer than the ovate-lanceolate glume.

HAB. Bogs. May. 4. Culm 12—18 in. high, *slend.* ; *spik. subdist.*, $\frac{1}{2}$ in. long.

9. *C. retroflexa* : spikes about 4, subapproximate, ovate, the lowest one with a short bract ; fruit ovate-lanceolate, bidentate, scabrous on the margin, spreading and reflexed, as long as the ovate acute glume.

HAB. Meadows, &c. May. 4. Culm 8—12 in. high, *subhexang.* ; *spik.* 3—4—5.

10. *C. rosea* : spikes 4—6, remote, about 9-flowered, the lowest one with a setaceous bract overtopping the culm ; fruit ovate, acuminate, diverging and radiate, scabrous on the distinct margin, twice as long as the ovate obtuse glume.

HAB. Moist woods, &c. May. 4. Culm 12 in. high ; *spikes* 1 in. distant, *yell.-gr.*

11. *C. disperma* : spikes about 3, rather remote, mostly 2-flowered, somewhat erect, the lowest one bracteate ; fruit ovate, rather obtuse, nerved, plano-convex, smooth, with a scabrous margin, entire at the point, twice as long as the ovate, obtuse submucronate glume.

HAB. Mountain woods. May—June. 4. Culm 6—12 in. high ; *fruit small.*

12. *C. Muhlenbergii* : spikes about 5, ovate, crowded at the summit of the culm, bracteate at the base ;

fruit broad-ovate, compressed, nerved, bifid, somewhat diverging, scabrous on the margin, rather shorter than the ovate mucronate glume.

HAB. Woods. May. 4. *Culm* 1—2 ft. high; *plant* dark green.

13. *C. stipata*: spike compound, oblong; spikelets numerous (10—15,) oblong, aggregated, bracteate; bracts a little longer than the spikelets; fruit lanceolate, subterete and smooth below, spreading, bidentate at the point, which is scabrous, twice as long as the glumes.

HAB. Swamps. April. 4. *Culm* 1—3 ft. high, *thick, small; spik. crowded.*

14. *C. sparganioides*: spikelets about 8, many-flowered; upper ones approximate, lower ones subdistant, bracteate; fruit ovate, compressed, acuminate, bifid, diverging, scabrous on the margin, twice as long as the ovate mucronate glume.

HAB. Meadows. May. 4. *Culm* 2 ft. high; 2—4 *lowest spik. remote.*

15. *C. multiflora*: spike oblong, decomposed, bracteate, interrupted; spikelets glomerate, ovate-oblong, obtuse; fruit ovate, acuminate, compressed, crowded, bifid, 3-nerved, serrulate on the margin, at length diverging, rather shorter than the ovate cuspidate glume.

HAB. Wet meadows. May. 4. *Culm* 2 ft. high, *obtusely triang.; spike subpanic.*

16. *C. setacea*: spike oblong, decomposed, bracteate; spikelets glomerate, ovate, obtuse; fruit ovate, acuminate, compressed, bifid, subdiverging, as long as the ovate-lanceolate awned glume.

HAB. Meadows. June—July. 4. *Culm* 18—30 in. high, *acutely triang., sulcate.*

17. *C. paniculata*: spike decomposed, paniculate, interrupted, the branches alternate and somewhat remote; fruit ovate, acuminate, spreading, margined above, bifid.

HAB. Wet meadows. May. 4. *Culm* 18 in. high; *spikes not black in age.*

18. *C. teretiuscula*: spike decomposed or paniculate, dense, subacute, (often dioecious, at length brown,) spikelets with short bracts at the base; fruit ovate,

acuminate, somewhat gibbous at the base, bidentate, ciliate-serrulate on the margin.

HAB. Bogs. May. 4. Culm 18 in. high; spike narrow; fr. and glume brown.

2. *With 3 stigmas.*

19. *C. pedunculata*: spikes about 4, on long peduncles, very remote; fruit obovate, triquetrous, obtuse, smooth, entire at the orifice; glumes ovate, mucronate, (purple and green.)

HAB. Rocky hills. May. 4. Culm filif., 6 in. high; pedunc. mostly radical.

20. *C. ovata*: spikes about 5, pedunculate, ovate, pendulous; fruit obovate, acute at each end, as long as the ovate acute glume.

HAB. Canada. 4. Spikes densely imbricate; glumes brown.

C. Summit pistilliferous.

1. *With 2 stigmas.*

21. *C. Deweyana*: spikes about 3, sessile, loose, two of them approximate, the third distant, with long bracts at the base, (except the highest;) fruit oblong-lanceolate, subcompressed, rostrate, bifid at the point; beak serrulate; culm flaccid.

HAB. Woods. June. 4. Culm 1—4 ft. high, subprocumb.; plant yell.-green.

22. *C. loliacea*: spikes about 4, rather distant, few-flowered; fruit elliptical, obtuse, nerved, compressed, erect.

HAB. Swamps. June. 4. Culm 2 ft. high, slender.; spik. 3—5-fl.

23. *C. trisperma*: spikes 3, remote, alternate, sessile, ovate, uppermost one without a bract; fruit oblong, acute (or short-rostrate) entire at the point, many-nerved, subscabrous above, somewhat diverging, longer than the oblong acute hyaline glume.

HAB. Mountain bogs. June. 4. Culm 18 in. high; filif., prostr.; plant pale green.

24. *C. arida*: spikes 8, (large) subapproximate, dry; fruit elliptical, compressed, winged, terete in the

middle, acuminate at each end, divergingly bifid ; culm leafy.

HAB. Meadows. June. 4. Culm 2—3 ft. high ; leav. dark green ; spik. gray.

25. *C. lagopodioides* : spikes numerous, (10—16,) elliptic, crowded ; bract beneath the lowest overtopping the culm ; fruit lanceolate, acuminate, erect, bicuspidate, with a narrow serrulate margin, twice as long as the ovate-lanceolate glume.

HAB. Wet meadows. May. 4. Spikes large, at first subcylind.

26. *C. scoparia* : spikelets mostly 5, (sometimes 6 or 7,) ovate, sessile, approximate, aggregate, lowest one bracteate ; fruit ovate-lanceolate, margined, nerved, smooth, bicuspidate longer than the lanceolate acuminate glume.

HAB. Wet meadows. May. 4. Fruit not winged, tawny when mature.

27. *C. straminea* : spikes about 5, (4—7,) roundish, approximate, with short bracts at the base ; fruit roundish-ovate, rostrate, compressed, broadly-ovate, bidentate, serrulate, longer than the lanceolate glume.

HAB. Wet meadows. May. 4. A foot high ; spikes yellowish ; fr. acuminate.

28. *C. fœnea* : spikes numerous, (8—10,) inferior ones distinct, upper ones aggregated and confluent ; fruit ovate, acuminate, winged, bidentate, somewhat longer than the ovate glume.

HAB. Marshes. June. 4. Culm obtusely triang. ; spik. subglob. ; glumes rigid.

29. *C. cristata* : spikes numerous, (8—15,) aggregated into a kind of head ; fruit ovate-lanceolate, winged, diverging, serrate, longer than the ovate-lanceolate glume.

HAB. Wet thickets. June. 4. Spike crowded into an ovate head.

30. *C. festucacea* : spikes obovate, (5—8,) subapproximate, bracteate ; fruit roundish-ovate, rostrate, bidentate, winged, serrulate on the margin, longer than the ovate-lanceolate glume.

HAB. Woods and meadows. May. 4. Fruit green or silver-gray, not becoming tawny.

31. *C. stellulata* : spikes 3—4, rather remote, upper one attenuate at the base, the rest ovate; fruit ovate, plano-convex, spreading, and at length reflexed, short-acuminate, scabrous on the margin.

HAB. Wet places. May. 4. *Culm* 8—18 in. high; *fr.* broad; *point subentire*.

32. *C. scirpoides* : spikes 4, ovate, obtuse, approximate, uppermost one clavate; fruit ovate, bidentate, plano-convex, erect, and a little spreading, but not reflexed, subcordate, serrulate, longer than the ovate obtuse glume.

HAB. Meadows. May. 4. *Culm* 6—12 in. high, *strict*; *fr.* not reflexed.

33. *C. curta* : spikes about 6, subremote, somewhat cylindric-ovate, tumid, sessile; fruit short-ovate, plano-convex, rather acute, erect, entire at the point.

HAB. Wet meadows. May. 4. *Culm* nodding at the end; *glume whitish*.

34. *C. tenera* : spikes about 5, obovate, rather remote, sessile, attenuate at the base, the lowest bracteate; fruit ovate, compressed, rostrate, serrulate, longer than the oblong-lanceolate glume.

HAB. Moist meadows. May. 4. *Culm* 15—30 in. high; *spik.* brownish. (Is it *C. sterilis*?)

35. *C. remota* : spikes alternate, remote; bracts leafy, very long; fruit ovate acuminate, bifid, somewhat compressed.

HAB. Woods. Pennsylvania?

2. *With 3 stigmas.*

36. *C. atrata* : androgynous spikes 3, pedunculate, crowded, subpendulous in fruit, (black;) fruit roundish-ovate, with a short beak, bidentate.

HAB. High mountains. June. *Culm* 6 in. high; *spik.* large, black.

*** *Terminal spikes androgynous; the rest pistilliferous; stigmas 3.*

37. *C. virescens* : spikes 3, oblong, erect; upper one pedunculate, sterile below, the rest fertile, subsessile and bracteate; fruit ovate, obtuse, costate, pubescent.

HAB. Dry woods. May. *Culm* 1—2 ft. high; *leav. and sheath pubes.*; *plant dull green.*

β. *costata*: spikes larger; fruit strongly costate; exterior sheaths purple.

HAB. Rocky hills. *Culm* 2—3 ft. high.

38. *C. hirsuta*: spikes 3, erect, approximate, densely fruited, upper one ovate-oblong, on a short peduncle; the rest ovate, subsessile, bracteate; fruit roundish-ovate, nerved, obtuse, smooth, orifice entire, longer than the ovate acuminate glumes; leaves and sheaths pubescent.

HAB. Rocky woods. May. *Culm* 12—18 in. high; *spik. thick*; *young fr. pubes.*

39. *C. Buxbaumii*: spikes about 4, obovate, subremote, upper one androgynous and pedunculate, the rest sessile, with very long bracts; fruit ovate, obtuse, rather compressed, orifice entire, shorter than the ovate acuminate (brown) glume.

HAB. Sphagnous swamps. June. *Culm* 2 ft. high; *glume dark br.*; *fr. green.*

40. *C. digitalis*: spikes mostly 4, distant, slender, pedunculate, loosely-flowered, nodding; uppermost androgynous, fertile above; the rest all fertile; fruit oblong, subtriquetrous, obtuse, smooth, longer than the oblong mucronate glume.

HAB. Meadows. May. *Culm* 18 in. high, *slend.*; *spik. filif.*; *plant pale green.*

41. *C. formosa*: spikes 4, oblong, thick, distant, on exsert peduncles, nodding, uppermost one sterile at the base; fruit oblong, triquetrous, somewhat inflated, rather acute at each end; orifice nearly entire or 2-lobed, obscurely nerved, twice as long as the ovate acute glume.

HAB. Meadows. *Culm* 12—18 in. high; *leav. often subpubes.*; *plant yellowish-green.*

42. *C. Torreyana*: spikes 4, filiform, pedunculate, somewhat nodding, uppermost one sterile at the base; fruit oblong, triquetrous, acute at each end, slightly 2-lobed, shorter than the oblong awned glume; leaves and sheaths pubescent.

HAB. Meadows. *Culm* 18 in. high, *leafy*; *spik. splend.*; *rachis flex.*; *glum. hyaline.*

***** *Staminiferous and pistilliferous spikes distinct.*

† *Staminiferous spike solitary.*

2. *With 2 stigmas.*

43. *C. novæ angliæ*: sterile spike on a short peduncle; fertile 2—3, sessile, ovate, few-flowered, rather remote; fruit oval-subtriquetrous, rostrate, minutely pubescent, longer than the ovate-mucronate glume; culm slender, subdecumbent.

HAB. High mountains. Culm 6—8 in. high; leav. sm.; spik. mostly 4-fl., lowest dist.

44. *C. aurea*: fertile spikes mostly 3, oblong, loose-flowered, subpendulous, rather approximate, lower ones pedunculate; fruit obovate or pyriform, obtuse, nerved, entire at the orifice, longer than the ovate acute glume.

HAB. Wet rocks. May—June. Culm 3—10 in. high, subprocumbent; fruit dark orange.

2. *With 3 stigmas.*

§ *Pistilliferous spikes sessile, or with the peduncles inclosed.*

45. *C. varia*: fertile spikes 2—3, approximate, few-flowered, ovate, subsessile; sterile spike sessile, (or on a short peduncle;) fruit subglobose, acuminate, bifid, obtusely triangular, hispidly pubescent, as long as the ovate acuminate glume.

HAB. Rocky woods. April. Culm 8—12 in. high, filif.; fr. ventricose.

46. *C. marginata*: sterile spike pedunculate; fertile spikes mostly 2, approximate, subglobose, subsessile; fruit globose, woolly, bidentate, longer than the ovate-oblong glume.

HAB. Dry woods. April. Culm 8—12 in. high; sterile spike subtrigon.; glume margined.

47. *C. vestita*: sterile spike mostly solitary (rarely geminate, with the upper one elongate,) pedunculate, cylindrical-oblong; fertile 2, ovate-oblong, sessile, subapproximate, sometimes sterile at the summit; fruit ovate, subtriquetrous, nerved, with a short rostrum, pubescent, rather longer than the ovate mucronate glume.

HAB. Wet sandy soil. June. *Culm* 2 ft. high ;
glum. brown ; *fr.* bidentate.

48. *C. pubescens*: sterile spike subsessile ; fertile 3, oblong, erect, rather loosely-flowered, the lowest on a short peduncle ; fruit ovate triquetrous, rostrate, pubescent, orifice nearly entire, as long as the ovate mucronate glume ; leaves and culm pubescent.

HAB. Woods. May. *Culm* 12—18 in. high, erect or subdecum. ; *leav.* pale gr.

49. *C. flava*: sterile spike on a short peduncle ; fertile mostly 3, ovate, subapproximate, (the lowest rather remote,) on short included peduncles ; fruit ovate, densely imbricate, bidentate, with a curved and reflexed rostrum, shorter than the ovate-lanceolate glume.

HAB. Highland meadows. *Culm* 12—14 in. high, (sometimes 3—4 ;) *plant* yellowish.

50. *C. Æderi*: sterile spike on a short peduncle ; fertile about 3, ovate, approximate, subpedunculate, densely flowered ; fruit ovate-globose, horizontal, with a straight rostrum.

HAB. Wet rocks and banks. June. *Culm* 6—12 in. high ; *spik.* and *fr.* small, yell.

51. *C. tentaculata*: fertile spikes 2—3, (rarely 4,) sessile, ovate or ovate-cylindrical, approximate, horizontal ; bracts very long ; fruit ovate, ventricose, nerved, with a very long rostrum, orifice bidentate, longer than the lanceolate glume.

HAB. Wet meadows. May—June. *Culm* 12—18 in. high ; *spik.* very large, thick.

52. *C. nigra*: sterile spike pedunculate ; fertile 2—3, (rarely 4,) rather remote, oblong (black,) sessile, erect ; fruit obovate, compressed-triquetrous, subacute, orifice entire, as long as the ovate glume.

HAB. High mountains. July. *Culm* 8—12 in. high ; *fr.* smooth, nerveless ; *styles* 2—3.

53. *C. lupulina*: sterile spike on a short peduncle, (rarely geminate ;) fertile 3, subsessile, ovate-oblong, erect, approximate ; bracts very long and leafy ; fruit ovate, inflexed, nerved, long-rostrate, bicuspidate, much longer than the ovate glume.

HAB. Swamps. June. Culm 2—3 ft. high, thick and leafy; spike very thick.

β. *polystachia*: fertile spikes 5, oblong-cylindric, lowest one remote, on a long peduncle.

HAB. Swamps. Culm 2 ft. high; spik. 2—3 in. long.

54. *C. folliculata*: sterile spike pedunculate; fertile 2, (often solitary,) roundish, approximate, few-flowered, upper one sessile, lower one short peduncle; bracts leafy; fruit ovate, acuminate-rostrate, ovate, reflexed and diverging, bicuspidate.

HAB. Swamps. June. Culm 18 in. high; spik. 6—10-fl.; pl. dark green.

55. *C. Xanthophysa*: fertile spikes 3—4, ovate, very remote, pedunculate, few-flowered; fruit oblong-conical, somewhat inflated, striate, horizontal when mature, acute, bifid, longer than the ovate acuminate glume.

HAB. Swamps. June. Culm 2—4 ft. high, slender; fr. $\frac{1}{2}$ in. long; pl. yell.-gr.

56. *C. subulata*: sterile spikes short-pedunculate; fertile mostly 4, sessile, or with included peduncles, very remote, few-flowered, sterile at the apex; fruit subulate, reflexed, much longer than the lanceolate glume; culm very slender.

HAB. Cedar swamps. July. Culm 2 ft. high; spik. about 4-fl.

57. *C. alpestris*: fertile spikes 3, 5-flowered, the 2 uppermost approximate and sessile, the lowest radical, on a long peduncle; fruit obovate-oblong, triquetrous, scarcely rostrate, subpubescent, orifice oblique, as long as the oblong glume.

HAB. Woody hills. Culm 6 in. high.

- ♂♂ *Pistilliferous spikes on exsert peduncles, partly sheathed at the base.*

58. *C. alba*: sterile spike pedunculate; fertile 2—3, pedunculate, about 5-flowered; fruit obovate, with a short rostrum, obliquely truncate; sheath at the base of the culm hyaline, leafless.

HAB. Limestone hills. June. Culm 4—10 in. high, slender; bracts wh.; fr. dark.

59. *C. plantaginea* : fertile spikes mostly 4, on peduncles scarcely exerted, loosely-flowered ; fruit oblong-cuneiform, triquetrous, recurved at the apex ; culm sheathed at the base ; sheaths of the culm all leafless, (coloured ;) leaves broad.

HAB. Mountain woods. April—May. *Culm* 8—12 in. high, leafless ; sheath purp.

60. *C. anceps* : fertile spikes mostly 3, remote, subcylindric, loosely flowered, lower ones pedunculate ; fruit ovate, triangular, acute, striate, narrowed at the base, orifice obscurely bidentate, about as long as the ovate cuspidate glume.

HAB. Woods. April—May. *Culm* 12—14 in. high ; hyemal leav. very broad.

61. *C. oligocarpa* : fertile spikes 3, pedunculate, few-flowered ; lower peduncles elongate ; fruit short-ovate, acutely triangular, with a short rostrum, orifice entire, longer than the ovate glume.

HAB. Rocky woods. May. *Culm* 6 in. high, slend. ; leav. subglauc. ; spik. 5—8-fl.

62. *C. scabrata* : fertile spikes 5, subremote, cylindrical, mostly erect, lower ones long-pedunculate ; fruit ovate, with an acuminate rostrum, subventricose, scabrous, orifice oblique and somewhat bifid, longer than the ovate-lanceolate ciliate glume.

HAB. Bogs. May. *Culm* 18 in. high ; leav. broad, very scab. ; plant dark green.

63. *C. conoidea* : fertile spikes 2—3, oblong, remote, rather loose, uppermost subsessile, lower ones on long peduncles ; fruit oblong-conical, obtuse, recurved at the apex, as long as the awned glume.

HAB. Woods and meadows. May. *Culm* 6—12 in. high, leav. thin. ; spik. pale gr.

64. *C. tetanica* : sterile spike long-pedunculate ; fertile 2—3, remote, rather densely flowered, upper one subsessile, lowest on a long peduncle ; fruit ovate-oblong, acute at each end, nerved, subgibbous at the summit, oblique, orifice entire, longer than the ovate mucronate glume.

HAB. Moist meadows. May. *Culm* 12 in. high ; spikes very remote ; fr. subterete.

65. *C. laxiflora* : sterile spike subsessile ; fertile mostly 3, rather loose, remote, pedunculate, erect ;

fruit ovate oblong, ventricose, obtuse, somewhat shining, longer than the ovate cuspidate glume.

HAB. Woods and meadows. May. Culm 12—18 in. high; fr. inflated when mature.

66. *C. granularis*: sterile sessile or short-pedunculate; fertile mostly 3, remote, cylindrical, dense; uppermost subsessile, lowest on a long peduncle; fruit globose-ovate, nerved, orifice entire; rostrum very short and recurved.

HAB. Wet meadows. May. Culm 12 in. high; leav. subglauc.; spikes cylind., thick.

67. *C. sylvatica*: fertile spikes mostly 4, remote, filiform, dense, peduncles nodding; fruit ovate, rostrate, bifid, twice as long as the ovate mucronate glume.

HAB. Woods. May. Culm 12—18 in. high; spik. 1½ in. long; plant pale gr.

68. *C. flexuosa*: fertile spikes 4, remote, filiform, on nodding peduncles; fruit distant, alternate, oblong, acute at each end, rostrate, bifid, twice as long as the ovate-mucronate glume.

HAB. Meadows. June. Culm 18—24 in. high, spik. 2 in. long; rach. flex.

§ § § Pistilliferous spikes on long peduncles, nearly destitute of sheaths.

69. *C. umbellata*: cespitose; fertile spikes mostly 4, ovate, few-flowered, one sessile at the summit of the culm, the rest on radical peduncles and appearing subumbellate; fruit ovate, acuminate-rostrate, subpubescent, as long as the ovate acuminate glume.

HAB. Rocky hills. April. Culm 1—6 in. high; leav. long; spik. 3—5, 6—8-fl.

70. *C. miliacea*: fertile spikes 3, slender and cylindrical, nodding, slender and filiform; fruit ovate, triangular, without nerves, slightly rostrate, orifice entire, as long as the ovate-lanceolate glume.

HAB. Moist meadows. Culm 12—15 in. high; spik. subapprox., 1—2 in. long, gr.

71. *C. pallescens*: fertile spikes 2—3, ovate-cylindrical, dense, at length somewhat nodding; fruit obovate-oblong, obtuse; sheaths and culm pubescent.

HAB. Wet meadows. May. *Culm* 12 in. high; *fert. spik. mostly 3, thick, pale gr.*

72. *C. hystericina*: sterile spike pedunculate; fertile 2—3, thick, at length cernuous, upper one inclusely pedunculate, the rest on exsert peduncles; fruit ovate, inflated, subhorizontal, many-nerved, rostrate, orifice bifid, twice as long as the oblong awned glume.

HAB. Wet meadows. May. *Culm* 12—18 in. high; *fert. spik. 1 in. long; plant yell.-gr.*

73. *C. Pseudo-cyperus*: fertile spikes 4, cylindrical, pedunculate, upper ones subgeminat; fruit oblong-lanceolate, rostrate, reflexed, many-nerved, apex divaricately bifid.

HAB. Swamps. June. *Culm* 2—3 ft. high, thick; *spik. 2 in. long, dense.*

74. *C. limosa*: fertile spikes mostly 2, ovate or oblong-ovate, pedunculate, somewhat distant, pendulous; fruit suborbicular-elliptic, compressed, with a very short rostrum, (green,) orifice entire, as long as the ovate mucronate glume.

HAB. Sphagnous swamps. June. *Culm* 9—15 in. high; *glum. variable, ovate, oblong, acum. or cuspid, often very long.*

†† *Staminiferous spikes 2 or more.*

1. *With 2 stigmas.*

75. *C. cespitosa*: sterile spike subsolitary (or geminate;) fertile mostly 3, cylindrical, obtuse, distant, the lower on a short exsert peduncle; bracts strict; fruit ovate, somewhat acute, densely fruited in about 8 rows, orifice minute; longer than the ovate (black and margined) glume; leaves spreading.

HAB. Mountain bogs. *Culm* 12—18 in. high; *leav. dark gr.; fr. gr. nerveless.*

76. *C. crinita*: sterile spikes geminate, (sometimes androgynous;) fertile 4, distant, pendulous, cylindrical, dense; fruit roundish-ovate, ventricose, slightly rostrate, orifice entire, much shorter than the linear glume.

HAB. Swamps. June. *Culm* 2—4 ft. high ; *leav.* pale gr. ; *spik.* 2—3 in. long.

♀. *gynandra* : fertile spikes 3, oblong-cylindrical ; fruit short-ovate, somewhat longer than the awned glume.

HAB. Meadows. *Culm* 12—14 in. high ; *fr.* yellowish when mature.

77. *C. acuta* : sterile spikes 1—3 ; fertile mostly 3, subpedunculate, somewhat nodding, cylindrical, remote ; fruit oblong, entire at the orifice, as long as the oblong acute glume.

HAB. Wet meadows. *Culm* 2 ft. high, sharply triquetr. ; *glume* br. ; *fr.* nerveless.

2. *With* 3 stigmas.

78. *C. Barrattii* : sterile spikes subgeminate ; fertile about 3, oblong-cylindrical, sterile at the summit, nodding, distant ; fruit oblong, subtriquetrous, somewhat scabrous, orifice subentire ; a little shorter than the ovate lanceolate glumes ; leaves glaucous.

HAB. Sea coast. *Culm* 12 in. high ; *leav.* very smooth ; *glum.* dark brown.

79. *C. trichocarpa* : sterile spikes 2—4, pedunculate, (sometimes sterile at the summit ;) fertile 3, distant, pedunculate, erect, oblong-cylindrical ; fruit ovate-lanceolate, acuminate, bicuspidate, hairy, longer than the ovate acuminate glume.

HAB. Swamps. *Culm* 3 ft. high ; *fertile spik.* thick, subcylindr. ; *pedunc.* appress.

80. *C. filiformis* : sterile spike geminate ; fertile 2, ovate-oblong, sessile, distant ; fruit elliptical, villous, bifurcate, as long as the ovate-lanceolate somewhat awned glume ; leaves convolute.

HAB. Bogs. *Culm* 2—3 ft. high, *slend.* ; *rad.* *leav.* 2—3 ft. long, *filif.* above.

81. *C. vesicaria* : sterile spikes 3 ; fertile mostly 2, pedunculate, cylindrical ; fruit oblong, inflated, acuminate-rostrate, bicuspidate, longer than the lanceolate glume ; culm acutely triquetrous.

HAB. Wet meadows. May. *Culm* 2 ft. high ; *spik.* dense, 2—3 in. long.

82. *C. ampullacea* : sterile spikes 3 ; fertile 2—3,

cylindrical, short pedunculate, erect; fruit subglobose, inflated, rostrate, bifurcate, longer than the lanceolate glume; culm obtusely triangular.

HAB. Wet meadows. In N. America?

83. *C. retrorsa*: sterile spikes about 3, lower one often fertile at the base; fertile spikes about 5, approximate, (and clustered in a subcorymbose manner,) oblong-cylindrical, inclusely pedunculate, lowest one often remote; fruit ovate, inflated, reflexed, rostrate, half as long as the lanceolate glume.

HAB. Borders of ponds. *Culm 2 ft. high; fert. spik. thick, dense.*

84. *C. Schweinitzii*: sterile spikes 2, upper one elongate, pedunculate; fertile 3, oblong-cylindrical, subpendulous, rather remote, inclusely pedunculate; fruit oblong-ovate, acuminate-rostrate, inflated, bifurcate, longer than the lanceolate attenuate glume.

HAB. Wet sandy soil. June. *Culm 12 in. high; spik. light straw-colour.*

85. *C. bullata*: sterile spikes 3; fertile 2, oblong-cylindrical, rather loose, exsertly pedunculate and somewhat nodding, distant; fruit ovate-globose, inflated, erect, smooth, costate, rostrate-acuminate, orifice bifid, twice as long as the lanceolate glume.

HAB. Bogs. *Culm 18—24 in. high, slend.; fert. spik. remote, few-fl.*

86. *C. pellita*: sterile spikes 2, oblong; fertile 2, cylindrical, remote, erect, upper one sessile; fruit ovate, subtriquetrous, short-rostrate, hairy, bicuspidate, equal to the oblong awned glume.

HAB. Wet meadows. May. *Culm 2½ ft. high; leav. subrigid, flat.*

87. *C. lacustris*: sterile spikes about 4; fertile 2—3, erect, oblong-cylindrical, short pedunculate; fruit oblong, many-nerved, subrostrate, smooth, bifurcate, somewhat longer than the oblong mucronate glume.

HAB. Deep swamps. June. *Culm 3—5 ft. high; leav. broad; fr. brown.*

88. *C. longirostris*: sterile spikes 3, short; fertile 2—

3, cylindrical, loose, at length pendulous, long-pedunculate, subdistant; fruit ovate, subglobose at the base, smooth, bifid, rostrum very long, longer than the lanceolate glume.

HAB. Meadows and rocky woods. *Culm* 2 ft. high, *slend.*; *pedunc. filif.*

232. SCLERIA. Whip grass. *Cyperaceæ.*

1. *S. triglomerata*: culm erect, acutely triquetrous, scabrous; leaves broad-linear, subscabrous and a little hairy; spikes lateral and terminal, fasciculate; glumes ciliate, mucronate; nuts smooth and polished.

HAB. Marshes. July. 4. *Culm* 3—4 ft. high; *nut large, white, hard.*

2. *S. pauciflora*: stem triquetrous and with the narrow leaves smooth; spikes lateral and terminal, few-flowered, the lateral ones pendulous, terminal, fasciculate; glumes smooth; seed roughened.

HAB. Wet meadows. Aug. 4. *Culm* 2 ft. high, *slend.*; *lat. spikes* 2.

3. *S. verticillata*: stem simple, triquetrous, and with the leaves smooth; spike glomerate, naked, the clusters alternate, distant; glumes smooth; seed globose, mucronate, transversely corrugate.

HAB. Meadows. Aug. 4. *Culm* 1 ft. high, *slend.*; *nut small, tuberculate.*

533. TRIPSACUM. Sesame grass. *Gramineæ.*

- T. dactyloides*: spikes numerous, (3—4,) aggregate; florets sterile near the summit, fertile at the base.

HAB. Dry hills. Aug. 4. *Culm* 5—7 ft. high; *spik. large; stig. long, purp.*

β. monostachyon: spike solitary.

HAB. With the preceding.

534. COMPTONIA. Sweet fern.

C. asplenifolia.

HAB. Woods. May. *Shrub* 2—3 ft. high, *aromatic; leav. lobed-pinnat.*

TETRANDRIA.

535. ERIOCAULON. Pipewort. *Restiaceæ*.

1. *E. pellucidum*: scape slender, about 7-furrowed; leaves linear-subulate, canaliculate, smooth, pellucid, 5-nerved, transversely striate; head small, globose; scales of the involucre oval, obtuse.

HAB. Water. June. ♀. Scape 4—6 in. high; leav. rad., cesp.; fl. white.

2. *E. decangulare*: scape 10-furrowed; leaves ensiform, smooth; head large, hemispherical; scales of the involucre oval, acute; of the receptacle mucronate.

HAB. Water. Aug. Scape 2—4 ft. high; leav. without midrib; fl. wh.

536. ALNUS. Alder. *Salicinæ*.

1. *A. serrulata*: leaves obovate, acuminate, with the veins and their axils hairy underneath; stipules elliptical, obtuse.

HAB. Low grounds. March—Apr. Shrub 3—15 ft. high, much branch.

2. *A. undulata*: leaves oblong, acute, rounded at the base, doubly serrate; petioles and the veins beneath hairy; axils of the veins naked; stipules ovate-oblong.

HAB. Mountain swamps. April. Shrub 3—4 ft. high.

537. BOEHMERIA. *Urticææ*.

1. *B. cylindrica*: leaves opposite, ovate-oblong, acuminate, dentate, smooth; flowers diœcious; sterile spikes glomerate, interrupted; fertile cylindrical; stem herbaceous.

HAB. Shady swamps. July—Aug. ♀. Stem slender, 2 ft. high; leav. petiol.; fl. minute.

2. *B. lateriflora*: leaves alternate, ovate-lanceolate, acuminate, serrate, scabrous; stem herbaceous.

HAB. Woods. July. ♀. Stem smooth; leav. scabrous on both surfaces.

538. URTICA. Nettle. *Urticæ*.

1. *U. pumila*: leaves opposite, ovate, acuminate, 3-nerved, serrate; inferior petioles as long as the leaves; flowers monoecious, triandrous, in corymbed heads, shorter than the petioles.

HAB. Wet places. July—Aug. ☉. *Stem succulent, semitransparent; leav. shining.*

2. *U. urens*: leaves opposite, elliptical, about 5-nerved, acutely serrate; spikes glomerate, by pairs.

HAB. Waste places. May. ☉. *Stem 2 ft. high; plant stinging. ♂.*

3. *U. dioica*: leaves opposite, cordate, ovate-lanceolate, coarsely serrate; flowers dioecious; spikes paniculate, clustered, by pairs, longer than the petiole.

HAB. Roadsides, &c. May. ♀. *Stem 2—3 ft. high, erect; fl. sm., green; plant stinging. ♂.*

4. *U. procera*: leaves opposite, ovate-lanceolate, serrate; petioles ciliate; flowers dioecious; spikes somewhat branched, clustered, by pairs, longer than the petioles.

HAB. Shady banks. July—Aug. ♀. *Stem 3—4 ft. high; leav. subacuminate.*

5. *U. capitata*: leaves alternate, cordate-ovate, acuminate, serrate, 3-nerved, twice as long as the petiole; clusters spiked; spikes solitary, shorter than the leaves, leafy at the summit; stem naked.

HAB. Shady woods. June—July. ♀. *Stem 4—5 ft. high; leav. scab., on the stem opposite.*

6. *U. divaricata*: leaves alternate, ovate, acuminate, rather smooth; petioles long, ciliate; panicles axillary, solitary, much branched and divaricate, longer than the petiole; stem stinging.

HAB. Damp rocky places. July—Aug. ♀. *Stem 2—3 ft. high, branch.; leav. not cordate.*

7. *U. canadensis*: leaves cordate-ovate, acuminate-serrate, hispid on both sides; panicles axillary, generally by pairs, much branched and divaricate, inferior ones sterile and longer than the petiole, upper ones fertile, elongate, stem very hispid, stinging.

HAB. Shady rocks. Aug.—Sept. 4. Stem 4—6 ft. high; fibres tough.

539. PARIETARIA. Pellitory. *Urticeæ*:

P. pennsylvanica: leaves oblong-lanceolate, veined, with opaque dots; involucre 3-leaved, longer than the flower.

HAB. Rocks. July. ☉. Stem slender. 6—12 in. high, simple; fl. axill., clustered.

540. MORUS. Mulberry. *Urticeæ*.

M. rubra: diœcious; leaves cordate, ovate, acuminate, often 3-lobed, equally serrate, scabrous, pubescent beneath; fertile aments cylindrical.

HAB. Woods. May. A large tree, with long branches; leav. in young trees divided.

PENTANDRIA.

541. CROTONOPSIS. *Euphorbiaceæ*.

C. linearis: stem erect, dichotomously branching; leaves stellately pubescent above, covered with silvery scales beneath.

HAB. Swamps in pine barrens. June. 4. Stem 12—18 in. high: leav. lanc. or ovate.

542. AMARANTHUS. *Amaranthaceæ*.

1. *A. lividus*: flowers clustered, triandrous, in rounded spikes; leaves elliptic, retuse; stem erect.

HAB. In cultivated grounds. Aug. ☉. Stem 2 ft. high, smooth.

2. *A. hybridus*: flowers pentandrous; racemes decomposed, erect, crowded; leaves ovate-lanceolate.

HAB. Waste grounds. Aug. ☉. Stem 2—3 ft. high; racem. large, thick. ♂.

3. *A. Blitum*: flowers triandrous; racemes somewhat spiked; flowers 3-leaved; leaves ovate, retuse; stem spreading.

HAB. Waste places. July. ☉. Stem prostr., branched. ♂.

4. *A. spinosus*: flowers pentandrous, in terminal compound racemes; axils spiny.

HAB. Waste grounds. June—Aug. ☉. *Stem branch., diffuse, mostly coloured. §.*

5. *A. pumilus*: flowers pentandrous, in axillary clusters; leaves ovate, obtuse, emarginate, fleshy, subrugose; stem diffuse, smooth.

HAB. Sandy sea coast. Aug. ☉. *Stem and leav. purplish; plant smooth.*

543. XANTHIUM. Clot-weed. *Urticæ.*

1. *X. strumarium*: stem unarmed, branching; leaves cordate, lobed, unequally serrate, scabrous, 3-nerved; fruit elliptical, armed with uncinat rigid bristles; horns straight, spreading.

HAB. Old fields, &c. Sept. ☉. *Stem 2—3 ft. high; leav. large; fl. axill.*

2. *X. macrocarpon*: stem unarmed, spotted; leaves cordate, lobed, obscurely sinuate-dentate, scabrous, 3-nerved; fruit oval, densely armed with short rigid uncinat rigid bristles; horns incurved.

HAB. Near salt water. Aug. ☉. *Stem purp.-spotted; fr. very large, woolly.*

3. *X. spinosum*: spines ternate; leaves 3-lobed.

HAB. Waste places. Aug. ☉. *Stem 3 ft. high, much branch.; spin. long, yell.; fr. small.*

544. AMBROSIA. Hog-weed. *Urticæ.*

1. *A. trifida*: hairy, rough; leaves 3-lobed, serrate, with oval-lanceolate acuminate lobes; fruit 6-spined below the summit.

HAB. Along ditches, &c. Sept. ☉. *Stem 4—6 ft. high; leav. very large; spik. long, axill. and term.*

2. *A. elatior*: leaves bipinnatifid, nearly smooth; petioles ciliate; racemes terminal, paniculate; stem virgate.

HAB. Fields. Sept. ☉. *Stem 1—3 ft. high, pubes. when young; seg. of leav. acute.*

3. *A. artemisifolia*: leaves bipinnatifid, hoary beneath, the uppermost pinnatifid; racemes by threes, terminal; branches fastigiate.

HAB. Fields. Aug.—Sept. ☉. Stem 4 ft. high; leav. subpubes. above, whitish beneath.

4. *A. heterophylla*: leaves of the stem pinnatifid, subdentate, petiolate; uppermost ones lanceolate, sessile; petioles conspicuously ciliate; racemes terminal, solitary; stem paniculate.

HAB. Banks of rivers and ditches. Aug.—Sept.

HEXANDRIA.

545. ZIZANIA. Wild rice. Gramineæ.

1. *Z. aquatica*: panicle pyramidal, divaricate and sterile at the base, spiked and fertile above; pedicels of the flower clavate; awns long; seed linear.

HAB. In water. Aug. ♀. Culm 4—8 ft. high, thick; leav. broad-lin.; fl. decid.

2. *Z. miliacea*: panicle effuse, pyramidal; glumes with short awns; sterile and fertile florets intermixed; style 1; seed ovate, smooth; leaves glaucous.

HAB. In water. ♀. Culm 6 ft. high; joints smooth; leav. broad, perennial.

546. HYDROCHLOA. Gramineæ.

H. fluitans.

HAB. Lakes. July. ♀. Floating; culm long, slender; leav. flat; spik. solit., axill., setaceous; glumes awnless.

POLYANDRIA.

547. CERATOPHYLLUM. Hornwort. Uncertain.

C. demersum: fruit armed with 3 spikes.

HAB. Under water. July. ♀. Stem long, slender, much branch.; leav. verticill.

548. MYRIOPHYLLUM. Water milfoil. Haloragææ.

1. *M. spicatum*: sterile flowers in interrupted leafless spiked whorls.

HAB. In water. Aug.—Sept. 4. Stem *slend., branch. ; leav. verticil. by 4's, finely pectin.*

2. *M. verticillatum* : leaves pinnate, capillary, upper ones pectinate-pinnatifid ; flowers axillary, verticillate, upper ones sterile, octandrous.

HAB. In water. July. 4. Floating ; upper fl. sometimes perfect.

3. *M. heterophyllum* : inferior leaves capillary-pinnate, superior oval-lanceolate, acutely serrate ; flowers hexandrous, the highest often perfect.

HAB. Lakes. July. 4. Floating ; stem *simp. ; upper leav. in 5's and 6's ; fl. purp.*

4. *M. capillaceum* : leaves all capillary-pinnate ; flowers axillary, opposite, and alternate, tetrandrous, mostly perfect ; fruit quadrangular, formed of 4 cylindrical seeds.

HAB. Ponds. July—Aug. 4. Floating ; stem *branch., dichot. ; leaves hair-like.*

5. *M. ambiguum* : leaves petiolate, pinnate, the lowest capillary, emerging ones pectinate, uppermost nearly entire, subserrate ; flowers perfect ; anthers partly oblong ; fruit quadrangular.

HAB. Ponds. July. 4. Floating, *dichot. ; leav. atten. at base ; fl. axill. solit.*

6. *limosum* : stem roosting, erect, or procumbent ; leaves rigid, partly entire, or divided above, with setaceous divisions.

HAB. Miry shores. July. 4. Stem 1—4 in. high ; leav. spread. ; seg. 3—5 ; anth. oblong.

8. *M. tenellum* : erect, nearly leafless ; bracts entire, obtuse ; petals linear, conduplicate and revolute ; flowers mostly perfect, tetrandrous.

HAB. Borders of ponds. July. 4. Stem *simp., 4—12 in. high ; fl. alternate ; pet. oblong-lin.*

SAGITTARIA. Arrowhead. *Juncæ.*

1. *S. sagittifolia* : leaves sagittate, acute ; lobes acute, straight, lanceolate.

α. *latifolia* : leaves broad-ovate, rather obtuse ; lobes ovate, slightly acuminate, straight.

β. *hastata* : leaves oblong-lanceolate, acute ; lobes

spreading, lanceolate, long-acuminate ; flowers mostly dioecious.

γ. *gracilis* : leaves linear ; lobes much spreading, linear, very long and acute.

δ. *pubescens* : leaves and stem pubescent ; bracts and calyx very pubescent.

HAB. Ponds, &c. July. 4. *Leav. large ; scape 1—2 ft. long ; fl. large, wh., verticil. in 3's.*

2. *S. obtusa* : leaves sagittate, dilated-ovate, rounded at the extremity, mucronate ; lobes approximate, oblong, obliquely acuminate, straight ; flowers dioecious ; sterile scape branched at the base.

HAB. Ponds. July. 4. *Leav. large ; sap milky, affording gum ; fl. wh.*

3. *S. heterophylla* : leaves simple, linear and lanceolate, acute at each extremity, or elliptical and sagittate, with the lobes linear and divaricate ; scape simple, few-flowered ; flowers monoecious, the fertile subsessile.

HAB. Ponds. July. 4. *Scape 1 ft. high ; leav. rarely sagitt.*

4. *S. rigida* : leaves narrow-lanceolate, carinate beneath, rigid, very acute at each extremity ; scape branched ; flowers monoecious.

HAB. Deep water. July—Aug. 4. *Very tall ; petioles stiff ; fl. numerous.*

5. *S. simplex* : leaves linear-lanceolate, acute, narrowed towards the base ; scape simple, many-flowered ; flowers dioecious.

HAB. Muddy banks, &c. Aug. 4. *Scape 8—15 in. high ; leav. not rigid ; fl. small.*

6. *S. acutifolia* : leaves subulate, sheathed at the base, convex on the back ; scape simple, few-flowered, longer than the leaves ; flowers monoecious.

HAB. Muddy shores. Aug. 4. *Scape 6 in. high ; fl. pedunc. ; Stam. 12—15.*

7. *S. pusilla* : leaves linear, obtuse and short, a little flattened, foliaceous at the summit ; scape simple, mostly shorter than the leaves ; flowers monoecious, few ; fertile flowers deflexed.

HAB. Muddy shores. Aug. 4. *Scape 2—4 in. high ; fl. very small, fertile subsolit.*

550. QUERCUS. Oak. *Corylaceæ*.

* *Fructification biennial; leaves setaceously mucronate.*

† *Leaves entire.*

1. *Q. Phellos* : leaves deciduous, linear-lanceolate, attenuate at each end, very entire, smooth, mucronate; acorn roundish.

HAB. Sandy woods. *A large tree; young leaves dentate; acorn small.*

2. *Q. imbricaria* : leaves deciduous, oblong, acute at each end, mucronate, very entire, shining, pubescent beneath; cup flat; scales broad-ovate; acorn subglobose.

HAB. Woods and river banks. *A large tree.*

†† *Leaves dentate, or with short lobes.*

3. *Q. heterophylla* : leaves on long petioles, ovate-lanceolate and oblong, entire, or coarsely toothed; cup hemispherical; acorn subglobose.

HAB. River banks. *A hybrid?*

4. *Q. aquatica* : leaves obovate-cuneiform, smooth, very entire, obscurely 3-lobed at the end, with the middle lobe largest; cup hemispherical; acorn subglobose.

HAB. Swamps. *Tree middle-sized; leaves very variable.*

5. *Q. triloba* : leaves oblong-cuneiform, acute at the base, somewhat 3-lobed at the end; lobes equal and mucronate, tomentose beneath; cup flat; acorn depressed-globose.

HAB. Pine barrens. *Tree small.*

6. *Q. nigra* : leaves coriaceous, cuneiform, subcordate at the base, dilated, and retusely 3-lobed at the summit, when young, mucronate, smooth above, rusty pubescent beneath; cup turbinate, with the scales obtuse and scarious; acorn short-ovate.

HAB. Pine barrens. *Tree 10—20 ft. high; acorns abundant.*

7. *Q. tinctoria* : leaves ovate-oblong, slightly lobed, pubescent beneath; lobes oblong, obtuse, mucronate; cup flat; acorn depressed-globose.

HAB. Woods. *A large tree; bark rough, blackish.*

3. *Q. discolor*: leaves oblong, pinnatifid-sinuate, pubescent beneath; lobes oblong, dentate, setaceously mucronate; cup turbinate, acorn ovate.

HAB. Upland forests. *A large tree; young leaves downy on both sides.*

† † † *Leaves deeply sinuate and lobed.*

9. *Q. coccinea*: leaves long-petiolate, oblong, deeply sinuate, smooth; lobes divaricate, dentate, acute, setaceously mucronate; cup turbinate, scaly; acorn short-ovate.

HAB. Woods. *A large tree; leav. bright green; cup with prom. scales*

10. *Q. rubra*: leaves long-petiolate, smooth, obtusely sinuate; lobes rather acute, dentate, setaceously mucronate; cup flat, nearly smooth; acorn sub-ovate.

HAB. Woods. *A large tree; leav. bright green; sinuses large, rounded.*

11. *Q. Catesbaei*: leaves on short petioles, cuneate at the base, oblong, deeply sinuate, smooth; lobes 3—5, divaricate, dentate, acute, setaceously mucronate; cup turbinate, broad; scales obtuse, those of the margin inflexed; acorn subglobose.

HAB. Pine barrens. *Shrubby; 6—15 ft. high; leav. subsessile.*

12. *Q. falcata*: leaves on long petioles, obtuse at the base, woolly beneath, 3-lobed and sinuate; lobes falcate, setaceously mucronate, terminal one longer; cup crateriform; acorn globose.

HAB. Dry woods. *A large tree; leav. with 3—5 large lobes, shining above.*

13. *Q. palustris*: leaves on long petioles, oblong, deeply sinuate, smooth; axils of the veins villous beneath; lobes divaricate, dentate, acute, setaceously mucronate; cup flat, smooth; acorn subglobose.

HAB. Wet woods. *A large tree; acorns small, abundant.*

14. *Q. Bannisteri*: leaves on long petioles, obovate, cuneiform, 3—5 lobed, entire on the margin, grayish-tomentose beneath; lobes setaceously mucronate; cup subturbinate; acorn subglobose.

HAB. Sandy fields and mountains. *Shrub 4—6 ft. high ; acorns abundant.*

** *Fructification annual ; fruit pedunculate ; leaves awnless.*

† *Leaves sinuate.*

15. *Q. obtusiloba* : leaves oblong, sinuate, cuneate at the base, pubescent beneath ; lobes obtuse, the upper dilated ; cup hemispherical ; acorn oval.

HAB. Woods. *A middling large tree ; leaves mostly 5-lobed ; cup deep.*

16. *Q. macrocarpa* : leaves woolly beneath, deeply lyrato-sinuately lobed ; lobes obtuse, repand, upper ones dilated, cup deep, with the upper scales bristly ; acorn short-ovate.

HAB. Woods. *A large tree ; branches scabrous ; acorns very large.*

17. *Q. olivæformis* : leaves oblong, smooth, glaucous beneath, deeply and unequally sinuate-pinnatifid ; fruit elliptical-ovate ; cup very deep, crenate above ; acorn elliptical-oval.

HAB. Woods. *A large tree.*

18. *Q. alba* : leaves oblong, pinnatifid-sinuate, pale or pubescent beneath ; lobes oblong, obtuse, mostly entire ; cup deep, tuberculate ; acorn ovate.

HAB. Woods. *A very large tree ; bark white ; leav. pubes. beneath when young.*

†† *Leaves entire, dentate.*

19. *Q. Prinus* : leaves on long petioles, obovate, acute, pubescent beneath, coarsely toothed ; teeth unequal, dilated, callous at the tip ; cup deep, attenuate at the base ; acorn ovate.

HAB. Shady woods. *A large tree.*

20. *Q. bicolor* : leaves on short petioles, oblong-obovate, whitish-tomentose beneath, coarsely toothed, entire at the base, teeth unequal, dilated, rather acute, callous at the tip ; fruit in pairs on long peduncles ; cup hemispherical ; acorn oblong-ovate.

HAB. Woods. *A large tree ; pedunc. long and slender ; acorn pubes.*

β. *mollis* : leaves merely toothed, not pinnatifid ; under side partly ferruginous and softly pubescent.

HAB. Swampy elevated forests. *Trees 60—70 ft. high.*

21. *Q. montana*: leaves on petioles of middling length, broad-obovate, oblong, white-tomentose beneath, shining above, coarsely toothed, obtuse and unequal at the base; teeth subequal, very obtuse; fruit in pairs, on short peduncles; cup hemispherical; scales tuberculate and rugose; acorn ovate.

HAB. Rocky woods and mountain sides. *A large tree; fr. middle sized.*

22. *Q. castanea*: leaves on long peduncles, oblong-lanceolate, obtuse at the base, acuminate, tomentose beneath, coarsely toothed; teeth subequal, dilated, obtuse; cup hemispherical; acorn ovate-subglobose.

HAB. Rocky and mountain woods. *A large tree; fr. on short pedunc.*

23. *Q. Chinquapin*: leaves on short petioles, obovate, acute at the base, coarsely toothed, glaucous beneath; teeth subequal, dilated, callous at the tip; cup hemispherical; acorn ovate.

HAB. Barren woods. *A shrub 3—4 ft. high; acorns small, numerous.*

551. CORYLUS. Hazel-nut. *Corylaceæ.*

1. *C. americana*: leaves roundish, cordate, acuminate; involucre roundish-campanulate, larger than the subglobose nut, border dilated, coarsely serrate.

HAB. Fields and woods. April. *A shrub 3—5 ft. high; nuts large, edible.*

2. *C. rostrata*: leaves oblong-ovate, acuminate; stipules linear-lanceolate; involucre campanulate-tubular, longer than the nut, two-parted, with dentate segments.

HAB. Rocky woods. May. *A shrub 2—3 ft. high; involucre with a long rostrum.*

552. FAGUS. Beech. *Corylaceæ.*

- F. ferruginea*: leaves ovate-oblong, acuminate, pubescent beneath, ciliate on the margin, coarsely toothed, obtuse at the base and unequally subcordate; nut ovate, acutely triangular, very acute.

HAB. Woods. *A large tree; bark smooth; fruit muricate; leav. ribbed.*

2. *F. sylvatica*; leaves ovate, acuminate, slightly dentate, ciliate on the margin, acute at the base; nut ovate, triquetrous, obtuse, but mucronate.

HAB. Woods. *A large tree with num. branch.; leav. bright green.*

553. CASTANEA. Chesnut. *Corylaceæ*.

1. *C. vesca*, *ß. americana*: leaves lanceolate, acuminate, mucronately serrate, smooth on both sides.

HAB. Woods. June. *A large tree; trunk straight; leav. large; sterile spik. filif.*

2. *C. pumila*: leaves oblong, acute, mucronately serrate, tomentose and hoary beneath.

HAB. Sandy woods. *A shrub or small tree; fruit small, very sweet.*

554. BETULA. Birch. *Salicinæ*.

1. *B. populifolia*: leaves deltoid, long-acuminate, unequally serrate, very smooth; petioles smooth; strobile pedunculate; scales with roundish lateral lobes.

HAB. Rocky woods and mountains. May. *A small or middle sized tree.*

2. *B. excelsa*: leaves ovate, acute, serrate; petioles pubescent, shorter than the peduncle; strobile ovate, erect; scales with rounded lateral lobes.

HAB. Woods. *A large tree; bark smooth and yellowish, somewhat fragrant.*

3. *B. nigra*: leaves rhombic-ovate, doubly serrate, acute, pubescent beneath, entire at the base; strobile ovate; scales villous, with the segments linear and equal.

HAB. Banks of rivers. *A middle sized tree; leav. acutely serrate.*

4. *B. papyracea*: leaves ovate, acuminate, doubly serrate, the veins beneath hairy; peduncles smooth; strobile nodding, pedunculate; scales with the lateral lobes short and suborbicular.

HAB. Woods. *A large tree; cuticle tough, composed of numerous membranaceous layers.*

5. *B. lenta*: leaves cordate-ovate, sharply serrate, acuminate; nerves beneath and the petiole hairy; strobile erect; scales smooth, the lobes equal and obtuse, with elevated veins.

HAB. Woods. *A large tree; bark aromatic; branchlets dark, spotted.*

6. *B. pumila*: young branches pubescent, not punctate; leaves orbicular-obovate, petiolate, thickly pubescent beneath; strobile cylindrical.

HAB. Mountain bogs. June. *Shrub 2—3 ft. high; leav. 1 in. long, on short pet.*

7. *B. glandulosa*: branches glandularly punctate, smooth; leaves obovate, serrate, entire at the base, smooth, subsessile; strobile oblong; scales half 3-cleft; seed orbicular, with a narrow margin.

HAB. Mountain swamps. *Shrub 2 ft. high.*

8. *B. nana*: very smooth leaves; orbicular, crenate, reticulate beneath; scales of the strobile deeply 3-parted; segments oblong; seed orbicular, nearly wingless.

HAB. High mountains. *Shrub 1—2 ft. high; leav. ½ in. long.*

555. CARPINUS. Hornbeam. *Corylaceæ.*

- C. americana*: leaves oblong-ovate, acuminate, unequally serrate; strobile with 3-parted scales, the middle segment oblique, toothed on one side.

HAB. Woods. May. *A small tree; fertile aments loose; scales foliaceous.*

556. OSTRYA. Hop hornbeam. *Corylaceæ.*

- O. virginica*: leaves ovate-oblong, cordate at the base, acuminate, unequally serrate; strobile oblong-ovate, erect; buds acute.

HAB. Woods. *A small tree; cones large, resembling hops.*

557. PLATANUS. Buttonwood.

- P. occidentalis*: leaves lobed-angular; branches whitish.

HAB. Woods. *A very large tree; leav. very broad; aments glob., pendulous.*

558. LIQUIDAMBAR. Gum-tree. *Corylaceæ*.

L. styraciflua: leaves palmately lobed; lobes acuminate, serrate, with the sinuses at the base of veins villous.

HAB. Woods. *A large tree; leav. 5-lobed, cordate, dark green.*

559. JUGLANS. Walnut. *Corylaceæ*.

1. *J. nigra*: leaflets numerous, ovate-lanceolate, serrate, slightly cordate, tapering to the summit; under surface and petioles subpubescent; fruit globose, scabrous, punctate.

HAB. Woods. *A large tree; leav. pinnate; leaflet 15—21; fr. large, edible.*

2. *J. cinerea*: leaflets numerous, lanceolate, serrate, rounded at the base, soft-pubescent beneath; petioles villous; fruit oblong-ovate, with a terminal projection, viscid and hairy; nut oblong, acuminate, deeply and irregularly sculptured.

HAB. Woods. *A large tree; leaflet 15—17; fruit very viscid; nut edible.*

560. CARYA. Hickory. *Corylaceæ*.

1. *C. tomentosa*: leaflets about 7, oblong-lanceolate, acuminate, slightly serrate, pubescent and scabrous beneath, the odd one sessile; ament filiform, tomentose; fruit roundish, smooth; pericarp very thick; nut somewhat 6-angled; shell thick and very hard.

HAB. Woods. *A large tree; leav. pinnate; veins pubes. above; nuts edible.*

2. *C. alba*: leaves 5—7, on long petioles, oblong-lanceolate, acuminate, sharply serrate, villous beneath, the odd one sessile; aments filiform, smooth; fruit depressed-globose; nut compressed.

HAB. Woods. *A large tree with scaly bark; fruit large; nut white, thin-shelled.*

3. *C. sulcata*: leaflets generally 9, obovate-lanceolate, acuminate, serrate, pubescent beneath, the odd

one subsessile and attenuate at the base; fruit roundish, 4-angled; nut subglobose, slightly compressed, conspicuously mucronate.

HAB. Mountain woods. *A large tree; nuts large, with very thick pericarps.*

4. *C. amara*: leaflets generally 9, ovate-oblong, acuminate, acutely serrate, smooth on both sides; fruit subglobose; nut smooth, mucronate, with the shell fragile.

HAB. Dry woods. *A large tree; nerves of the leav. pubes. beneath; nuts bitter.*

5. *C. porcina*: leaflets 7, ovate-lanceolate, acuminate, serrate, smooth on both sides; fruit oblong, or obcordate; nut smooth, very hard.

HAB. Woods. *A large tree; leaflet. 5—7; nuts small, very bitter.*

561. ARUM. Wake-robin. *Aroideæ.*

1. *A. dracontium*: stemless; leaves pedate; leaflets lanceolate-oblong, entire; spadix subulate-filiform, longer than the oblong convolute spathe.

HAB. River banks. June—July. 4. *Petiole 12—18 in. long; leav. large; spath. short.*

2. *A. triphyllum*: stemless; leaves ternate; leaflets ovate, acuminate, very entire; spadix clavate; spathe ovate, acuminate, convolute below, flat and bent above.

HAB. Wet shady places. May—June. 4. *Root tub. acrid; spath. green or purp.; berry red.*

562. LECONTIA.* *Aroideæ.*

1. *virginica*:

HAB. Swamps. July. 4. *Leav. petiol., oblong, hastate-cordate, with the lobes obtuse; spathe lanceolate, involute; border undul.; spad. slender.*

563. CALLA. Water arum. *Aroideæ.*

- C. palustris*: leaves cordate; spathe flat; spadix covered with perfect flowers.

* A new genus, separated from *Arum* by W. Cooper, Esq.

HAB. In water. July. 4. Root thick, creeping; leav. acum.; spath. oval, white inside.

MONADELPHIA.

564 PINUS. Pine. Coniferæ.

* Leaves solitary, distinct at the base. ABIES.

1. *P. balsamea*: leaves solitary flat, emarginate or entire, glaucous beneath, somewhat pectinate, recurved-spreading, sub-erect above; cones cylindric, erect; bracts abbreviate, obovate, conspicuously mucronate, subserulate.

HAB. Mountains. A small tree; leav. 3—10 lin. long, dense; scales of the cones thin.

- β. *Fraseri*: leaves short, emarginate, subsecund, erect above; cones ovate-oblong; bracts elongated, incisely denticulate.

HAB. High mountains. Smaller than the preced.; leaves shorter; cones small.

2. *P. canadensis*: leaves solitary, flat, denticulate, nearly in two rows; cones ovate, terminal, scarcely longer than the leaves.

HAB. Rocky woods and mountains. A large tree; branch. and leav. horizont.; leav. lin., obtuse.

3. *P. nigra*: leaves solitary, quadrangular, erect, straight; cones ovate; scales elliptical, undulate on the margin, erect, summit denticulate.

HAB. Mountain swamps. A middle sized tree; leav. dense, dark green; cones 1—2 in. long.

4. *P. rubra*: leaves solitary, subulate; cones oblong, obtuse; scales rounded, somewhat 2-lobed, entire on the margin.

HAB. Maine.

5. *P. alba*: leaves solitary, quadrangular, incurved; cones subcylindrical, loose; scales obovate, very entire.

HAB. Mountain swamps. A small tree; leav. pale green, not crowded.

** Leaves 2—5, in a short cylindrical sheath. PINUS.

6. *P. inops*: leaves by pairs, short; cones recurved,

oblong-conical, as long as the leaves; spines of the scales subulate, straight.

HAB. Pine barrens. *A middle sized tree; leav. 1—2 in. long; cones 2 in. long.*

7. *P. resinosa*: leaves elongate, by pairs, with long sheaths; cones ovate-conical, rounded at the base, mostly solitary, half as long as the leaves; scales dilated, unarmed.

HAB. Dry woods. *A large tree; bark red, smooth; cones large; scales not mucronate.*

8. *P. Banksiana*: leaves short, by pairs, rigid, divaricate, oblique; cones recurved and twisted; scales unarmed.

HAB. Barren rocky places. *A small straggling tree; leav. 1—2 in. long.*

9. *P. variabilis*: leaves slender, geminate and by threes, canaliculate; cones mostly solitary, ovate-conical; scales with a subulate incurved point.

HAB. Woods. *A large tree; leav. mostly by pairs, 4—5 in. long; cones small.*

10. *P. rigida*: leaves by threes, with short sheaths; sterile aments erect-incumbent; cones ovate, scattered or clustered; spines of the scales reflexed.

HAB. Barren sandy soils. *A large tree; bark thick and rough; cones large.*

11. *P. scrotina*: leaves by threes, elongate; sterile aments erect, incumbent; cones ovate; spines of the scales straight, very slender.

HAB. Swamps. *A large tree resembling the preceding.*

12. *P. Strobis*: leaves by fives, slender; sheaths very short; cones pendulous, cylindrical, longer than the leaves; scales loose.

HAB. Fertile soil. *A very large tree; leav. very delicate; cones 3 in. long.*

*** *Leaves fasciculate, (deciduous.)* LARIX.

13. *P. microcarpa*: cones roundish, few-flowered; scales inflexed; bracts elliptic, obtusely acuminate.

HAB. Swamps and low grounds. *A pretty large tree; scales red, brown, or white.*

565. THUYA. Arbor vitæ. *Coniferæ*.

T. occidentalis: branches ancipitous; leaves imbricate in 4 rows, ovate-rhomboidal, appressed, naked, tuberculate; cones obovate; interior scales truncate, gibbous below the summit.

HAB. Rocks and mountains. *A small tree; branch. irreg., tough; leav. perennial.*

566. CUPRESSUS. Cypress. *Coniferæ*.

1. *C. thuyoides*: branchlets ancipitous; leaves imbricate in 4 rows, ovate, tuberculate at base; cones subspherical, angular.

HAB. Swamps. *A large tree; leav. minute, peren.; cones very small.*

2. *C. disticha*: leaves distichous, flat; sterile florets paniculate, leafless; cones spherical.

HAB. Swamps. *A very large tree; leav. small, lin., acute.*

567. ACALYPHA. Three-seeded mercury. *Euphorbiacæ*.

A. virginica: pubescent; leaves on short petioles, lanceolate-oblong, serrate; involucre cordate, ovate, dentate, axillary, nerved, dentate.

HAB. Dry gravelly soil. Aug. ☉. *Stem 8—15 in. high, erect, pubes.; invol. subsess.*

568. PHYLLANTHUS. *Euphorbiacæ*.

P. obovatus: leaves alternate, oval, obtuse, smooth, somewhat distichous; flowers few, axillary, pedicellate, nodding; stem erect; branches distichous.

HAB. Gravelly banks. June—July. ☉. *Stem 12 in. high; leav. entire; Stam. 6.*

569. MELOTHRIA. Small creeping cucumber. *Cucurbitacæ*.

M. pendula: leaves somewhat reniform, lobed and angled, slightly hispid; berry oval, smooth.

HAB. Shady banks. June. ☉. *Slender, climbing; stem hairy; fl. yell.*

570. **MOMORDICA.** Balsam-apple. *Cucurbitaceæ.*

M? *echinata*: pericarp a pomaceous berry, 4-seeded, inflated, roundish, setose-echinate; leaves cordate, angularly 5-lobed, acuminate, entire; calyx 6-cleft; corolla 6-parted.

HAB. Banks of rivers. Aug. ☉. Climbing; fl. small; fr. $1\frac{1}{2}$ in. long.

571. **SICYOS.** Single-seeded. *Cucurbitaceæ.*

S. *angulata*: leaves cordate, 5-angled, dentate, scabrous; fruit clustered, hispid.

HAB. Banks of rivers, &c. ☉. Climbing; stem pubes.; leav. petiol.; fr. small, ovate.

DIOECIA.

DIANDRIA.

572. **VALLISNERIA.** STAM. FL. *Spath* ovate, 2-parted. *Spadix* covered with minute flowers. *Cal.* 3-parted. PISTILLIF. *Spath* bifid, 1-flowered. *Cal.* 3-parted, superior. *Cor.* 3-petalled. *Stig.* ligulate, bifid. *Caps.* valveless, 1-celled. *Seeds* numerous, attached to the sides.

573. **SALIX.** STAM. FL. *Ament* cylindric; scales 1-flowered, imbricate, with a nectariferous gland at the base. *Cal.* and *Cor.* 0. *Stam.* 1—5. FERTILE FL. *Scales* of the ament 1-flowered. *Cal.* and *Cor.* 0. *Stig.* 2, mostly bifid. *Caps.* 1-celled, 2-valved, many-seeded. *Seeds* comose.

574. **FRAXINUS.** *Cal.* 0, or 3—4-cleft. *Cor.* 0, or 4-petalled. *Stam.* 2. *Caps.* 2-celled, 2-seeded, compressed and foliaceous at the extremity. *Seed* solitary, pendulous.—Polygamous.

TRIANDRIA.

575. **EMPETRUM.** *Cal.* 3-parted, persistent. STAM. FL. *Pet.* 3, marcescent. *Stam.* 3; filaments

long ; *anth.* 2-parted.. FERTILE. *Germ.* superior, depressed ; *style* 0, or very short ; *stig.* 9, reflexed, spreading. *Berry* round, 1-celled, 2—6-seeded. *Seed* erect, bony.

TETRANDRIA.

576. MYRICA. *Ament* ovate-oblong ; *scales* lunulate. STAM. FL. *Stam.* 4—6 ; *anth.* 4-valved. FERTILE. *Germen* 1 ; *stig.* 2. *Drupe* 1-celled, 1-seeded.
577. VISCUM. *Cal.* with the margin entire or a little prominent. *Pet.* 4, short, united at the base. STAM. FL. *Anth.* 4, sessile, adnate with the petals. FERTILE. *Germ.* crowned with the margin of the calyx ; *stig.* 1. *Berry* globose, 1-seeded.

PENTANDRIA.

578. NYSSA. PERFECT FL. *Cal.* 5-parted. *Cor.* 0. *Pistil.* 1. *Drupe* inferior. *Nut* 1-seeded. STERILE *Stam.* 5, 8, 10, or 12, inserted around a peltate gland.
579. ZANTHOXYLUM. STAM. FL. *Cal.* 5-parted. *Cor.* 0 *Stam.* 3—5—6. FERTILE. *Caps.* 3—5-celled, each 1-seeded.
580. ACNIDA. STAM. FL. *Cal.* 5-parted. *Cor.* 0. FERTILE. *Cal.* 3-parted. *Cor.* 0. *Styles* 0 ; *stig* 8, sessile. *Caps.* 1-seeded.
581. HUMULUS. STAM. FL. *Cal.* 5-leaved. *Anth.* with 2 pores at the extremity. *Cor.* 0. FERTILE. *Cal.* 1-leaved, large, persistent, concave, entire. *Cor.* 0. *Styles* 2. *Seed* 1.

HEXANDRIA.

582. SMILAX. STAM. FL. *Cal.* 6-leaved. *Cor.* 0. *Anth.* adnate to the filaments. FERTILE. *Style* minute, *stig.* 3. *Berry* 3-celled, superior, 1, 2, or 3-seeded.
583. DIOSCOREA. STER. FL. *Cal.* 6-parted. *Cor.* 0. FERTILE. *Styles* 3. *Caps.* 3-celled, trian-

gular, compressed; cells 2-seeded. *Seeds* with membranaceous margins.

584. GLEDITSCHIA. PERFECT. *Cal.* 6—8-parted, deciduous, 3 or 4 of the exterior segments smaller. *Cor.* 0. *Stam.* 5—6, rarely 8. *Legume* flatly compressed, 1, or many-seeded. STERILE. *Cal.* subturbinate, 5—8-parted, 3—5 of the segments interior. *Stam.* 6—8.

OCTANDRIA.

585. POPULUS. *Aments* cylindrical; *scales* lacinated. STERILE FL. *Stam.* 8—30, seated on a turbinate oblique entire calyx. FERTILE. *Cal.* turbinate. *Stig.* 4. *Caps.* superior, 2-celled, 2-valved, many-seeded. *Seeds* surrounded with long hairs.
586. DIOSPYROS. *Cal.* 4—6-cleft. *Cor.* urceolate, 4—6 cleft. STERILE FL. *Stam.* 8—16; *filam.* often producing 2 anthers. FERTILE. *Stig.* 4—5. *Berry* 8—12-seeded.
587. SHEPHERDIA. STERILE FL. *Cal.* 4-cleft. *Cor.* 0. *Stam.* 8, included, alternating with 8 glands. FERTILE. *Cal.* 4-cleft, campanulate, superior. *Style* 1; *stig.* oblique. *Berry* 1-seeded.

ENNEANDRIA.

588. ELODEA. *Spath* biind. STERILE FL. *Cor.* 3-petalled. *Stam.* 9, 3 of them interior. FERTILE. *Cal.* 3-parted; tube very long. *Pet.* 3. *Sterile* filaments 3. *Utriculus* about 3-seeded. *Seeds* cylindric.

DECANDRIA.

589. GYMNOCLADUS. *Cal.* tubular, 5-cleft. *Cor.* 4-cleft. *Cor.* 5-petalled. STERILE FL. *Stam.* 10. FERTILE. *Style* 1. *Legume* 1-celled, internally somewhat pulpy. *Seeds* roundish, large, hard.

POLYANDRIA.

590. MENISPERMUM. STERILE FL. *Cal.* 2-bracted, about 6-leaved, caducous. *Pet.* 6—9, glandular, minute, and retuse. *Stam.* 16—24; *anth.* adnate to the filaments, 4-lobed, 2-celled. FERTILE. *Germens* and *styles* 3—6. *Drupes* mostly solitary, 1-seeded. *Nut* lunate, compressed.

MONADE: PHIA.

591. JUNIPERUS. STERILE FL. *Ament* ovate; *scales* verticillate, peltate. *Anth.* 4—8, 1-celled. FERTILE. *Ament* globose; *scales* 3, coadunate. *Stig.* gaping. *Berry* with 3 bony 1-seeded *nuts*, surrounded with the united and fleshy *scales*.
592. TAXUS. *Flowers* surrounded with numerous *scales*. STERILE FL. *Stam.* 8—10; *anthers* peltate. FERTILE. *Style* 0; *stig.* concave. *Drupe* fleshy, open at the extremity. *Nut* 1-seeded.

DIOECIA.

DIANDRIA.

572. VALLISNERIA. *Hydrocharidææ*.

V. spiralis, β . *americana*: leaves linear and obtuse, equal the whole length, 3-nerved; margin aculeately serrulate; sterile peduncles very short, fertile, long, spiral.

HAB. Still water. Aug. 4. *Leav.* 2—3 lin. broad; *caps* cylind., long; *ped.* filiform.

573. SALIX. Willow. *Salicinæ*.

* *Leaves* entire, or obsoletely serrate.

1. *S. candida*: leaves linear-lanceolate, very long, obscurely denticulate at the extremity, pubescent above, white and tomentose beneath; margin re-

volute ; stipules lanceolate, as long as the petioles ; aments cylindric ; scales obovate-lanceolate, with a very long villus.

HAB. Woods. April. $\bar{h}$. Shrub 3—4 ft. high.

2. *S. viminalis* : leaves linear-lanceolate, obscurely crenate, white and silky beneath ; stipules very small, sub lanceolate ; branches straight ; germen subsessile, lanceolate ; style filiform ; stigma linear, mostly entire.

HAB. River banks, &c. April. A pretty large tree ; fil. yell. ; anth. orange. δ .

3. *S. Muhlenbergiana* : leaves lanceolate, rather acute, nearly entire, whitish, pubescent, rugose and veiny beneath, revolute on the margin ; stipules deciduous, lanceolate ; scales oblong, villous on the margin ; germen ovate-lanceolate, silky-villous, on a conspicuous pedicel ; style short ; stigma bifid.

HAB. Dry woods. April. Shrub 3—5 ft. high ; branch. gr.-yell. ; anth. purp. and yell.

4. *S. tristis* : leaves linear-lanceolate, acute at each end, revolute, on the margin, smoothish above, beneath rugosely veiny and tomentose ; stipules 0.

HAB. Dry woods. Shrub 3—4 ft. high.

5. *S. recurvata* : leaves obovate-lanceolate, acute, very entire, smooth, glaucous beneath, silky when young ; stipules 0 ; aments recurved ; scales black at the tip, with hairs as long as the ovate, silky, and subpedicellate germen ; style very short ; stigmas bifid.

HAB. Shady woods. Shrub 2—3 ft. high ; branch. brown, smooth ; buds yell.

6. *S. pedicellaris* : branches smooth ; leaves obovate-lanceolate, acute, very entire, smooth, and of the same colour on both sides ; stipules 0 ; aments pedunculate ; scales oblong, scarcely hairy, half as long as the pedicel ; germen ovate-oblong, on a very long pedicel ; stigmas sessile, bifid.

HAB. Mountains. April.

7. *S. rosmarinifolia* : leaves straight, linear-lanceolate, acute at each end, very entire, deciduously pubescent above, silky beneath ; scales oblong, ob-

tuse, ciliate ; germen pedicellate, lanceolate, villous ; stigmas subsessile, bifid.

HAB. Meadows and mountain swamps. *Shrub 3 ft. high ; branch. pubes. ; leav. 1½ in. long.*

8. *S. repens* : stem procumbent ; leaves acute, nearly entire, somewhat downy, glaucous, mostly very silky beneath ; germen on a long pedicel, lanceolate, very silky ; styles short ; stigmas bifid.

HAB. High mountains. *Shrub small, usually procumb.—Variable.*

* * *Leaves remotely and obtusely serrate.*

9. *S. conifera* : leaves oblong-lanceolate, remotely serrate, acute, smooth above, tomentose beneath ; stipules lunate, subdentate ; scales lanceolate, obtuse, villous ; germen pedicellate, lanceolate, silky ; style bifid ; stigmas 2-lobed.

HAB. Low thickets. April. *Shrub 4—3 ft. high ; frequently with excrescences on the branches.*

10. *S. myricoides* : leaves oblong-lanceolate, acute, obtusely serrate, smooth, glaucous beneath ; stipules ovate, acute, serrate ; aments villous, leafy at the base ; scales lanceolate, villous, (black ;) germen on long pedicels, lanceolate, smooth ; style bifid ; stigmas bifid.

HAB. Woods. *A small shrub ; branch. green ; young ones purp., smooth.*

11. *S. prinoides* : leaves oval-oblong, acute, remotely undulate-serrate, smooth, glaucous beneath ; stipules semicordate, incisely dentate ; germen pedicellate, ovate, acuminate, silky ; style long ; stigmas bifid.

HAB. Wet thickets, April. *A shrub 6—8 ft. high ; aments early, villous.*

12. *S. discolor* : leaves oblong, rather obtuse, smooth, remotely serrate, glaucous beneath ; stipules deciduous, lanceolate, serrate ; scales oblong, acute, (black,) hairy ; germen subsessile, lanceolate, tomentose, style of middling length ; stigmas 2-parted.

HAB. Low grounds. April. *A small tree ; branch. dark brown ; aments rather late.*

13. *S. angustata* : leaves lanceolate, acute, very long, gradually narrowed towards the base, serrulate.

very smooth, colour nearly uniform; stipules semicordate; germens pedicellate, ovate, smooth; style bifid; stigmas 2-lobed.

HAB. Banks of rivers. *Leaves very long.* Resembles No. 11.

*** *Leaves closely and acutely serrate.*

14. *S. nigra*: leaves lanceolate, acute at each end, serrulate, green on both sides, smooth except the petiole and the midrib above; stipules dentate; aments cylindric; scales oblong, very villous; filaments 3—6, bearded at the base; germens pedicellate, ovate, smooth; style very short; stigmas bifid.

HAB. Banks of rivers. May. *A small tree; branch. smooth; first leaves pubes.; aments long.*

15. *S. lucida*: leaves ovate-lanceolate, long-acuminate, rounded at the base, serrate, smooth on both sides, shining; stipules oblong, serrate; aments triandrous; scales lanceolate, obtuse, hairy at the base, serrate and smooth at the tip; germens lanceolate-subulate, smooth; style bifid; stigmas obtuse.

HAB. Swamps. May. *A small tree; leav. thick; branch. yell.-br.; aments late.*

16. *S. rigida*: leaves oblong-lanceolate, acuminate, subcordate at the base, rigid, smooth, acutely serrate, the lowest serratures long; petiole villous; stipules large, cordate, obtuse; stamens 3; scales lanceolate, (black,) woolly; germens on long pedicels, smooth; style very short; stigmas 2-parted.

HAB. Low thickets. May. *A small tree; branch. green, tough; aments late.*

17. *S. cordata*: leaves oblong-lanceolate, acuminate, cordate at the base, acutely serrate, smooth; stipules large, ovate-roundish, serrate; stamens 3; scales lanceolate, (black;) germens pedicellate, lanceolate, smooth; style very short; stigmas bifid.

HAB. Swamps. April—May. *A shrub 6—8 ft. high; leav. large, 1 in. broad.*

β. *falcata*: leaves narrow-lanceolate, very long, sub-falcate.

HAB. Swamps. *Leav.* 6—8 in. long.

18. *S. grisea* : leaves lanceolate, acuminate, serrulate, smooth above, silky or naked beneath ; stipules linear, deflexed, deciduous ; scales oblong, hairy, black at the tip ; germen oblong, pedicellate, silky ; stigmas sessile, obtuse.

HAB. Low bushy places. April. *Shrub* 6—8 ft. high ; *branch.* purp., brittle at base.

19. *S. vitellina* : leaves lanceolate, acuminate, with thickened serratures, smooth above, paler and somewhat silky beneath ; stipules 0 ; aments cylindrical, scales ovate-lanceolate, pubescent outside ; germen sessile, ovate-lanceolate ; stigmas subsessile, 2-lobed.

HAB. Road sides, &c. May. *A pretty large tree ; bark and twigs yell.* ♂.

574. FRAXINUS. Ash. *Oleineæ.*

1. *F. sambucifolia* : leaflets sessile, ovate-lanceolate, serrate, rugose and shining ; base rounded and unequal ; axils of the veins villous beneath ; flowers naked.

HAB. River banks and woods. April. *A large tree ; buds deep blue ; young shoots dotted, green.*

2. *F. acuminata* : leaflets petiolate, oblong, shining, acuminate, very entire, or slightly toothed, glaucous beneath ; flowers calyculate.

HAB. Woods. May. *A large tree ; first leav. downy ; summer leav. gr. above, wh. beneath.*

3. *F. pubescens* : leaflets petiolate, elliptical-ovate, serrate ; under surface, petioles, and young branches tomentose ; flowers calyculate.

HAB. Woods. May. *A large tree ; leav. 12—15 in. long ; leaflet often nearly entire, 3—4 pairs.*

4. *F. juglandifolia* : leaflets petiolate, ovate, opaque, serrate, glaucous beneath, axils of the veins pubescent ; branches smooth ; flowers calyculate.

HAB. Banks of rivers. *A small tree ; leav. 6—15 in. long ; seeds smaller than No. 2.*

TRIANDRIA.

575. EMPETRUM. Crow-berry. *Empetrea*.

E. nigrum : procumbent ; leaves linear-oblong.

HAB. High mountains. June. *Shrub small, evergreen ; leav. densely imbricate ; fl. axill.*

576. MYRICA. Gale. *Salicina*.

1. *M. Gale* : leaves lanceolate, broader above, serrate ; sterile ament imbricated ; scales acuminate, ciliate ; fruit scaly-capitate.

HAB. Borders of ponds and about mountain lakes. May. *Shrub 3—4 ft. high ; fruit spicy.*

2. *M. cerifera* : leaves cuneate-lanceolate, with a few serratures at top, acute ; sterile aments loose ; scales acute ; fruit spherical, naked, distinct.

HAB. Dry woods and copses. May. *Shrub 2—6 ft. high ; fruit small, covered with wax.*

577. VISCUM. Mistletoe. *Loranthæ*.

V. verticillatum : leaves cuneate-oval, 3-nerved, obtuse ; spikes axillary, solitary, about as long as the leaves ; sterile flowers mostly trifid.

HAB. Parasitic on trees. *Branch. oppos. ; sterile fl. mostly trifid ; berry white, diaph.*

PENTANDRIA.

578. NYSSA. Tupelo. *Combretaceæ*.

1. *N. villosa* : leaves oblong, very entire, acute at each end, the petiole, midrib, and margin villous ; fertile peduncles 3—6-flowered ; nut short-obovate, obtusely striate.

HAB. Low woods. June. *A large tree ; branch. horizont. ; fl. small, gr. ; drupe dark blue.*

2. *N. biflora* : leaves ovate-oblong, very entire, acute at each end, smooth ; fertile peduncles 2-flowered ; drupe short-obovate ; nut obtusely striate.

HAB. Swamps. June. *A large tree ; drupe deep blue.*

579. ZANTHOXYLUM. Tooth-ach tree. *Rutaceæ*.

Z. fraxineum: prickly; leaves pinnate; leaflets oval-lanceolate, subentire, sessile, equal at the base; petioles unarmed; umbels axillary.

HAB. Rocky woods. April. *Shrub 3-5 ft. high; prickles strong; leafl. 4-5 pairs.*

580. ACNIDA. Wild-hemp. *Chenopodeæ*.

1. *A. cannabina*: leaves ovate-lanceolate; capsules smooth, acutely angled.

HAB. Salt marshes. July—Aug. ☉. *Stem 2-4 ft. high, smooth; leav. alt.; fl. small, gr.*

2. *A. rusocarpa*: leaves oval-lanceolate; capsules obtusely angled, rugose.

HAB. Fresh-water marshes. July. ☉. +

581. HUMULUS. Hop. *Urticæ*.

H. *Lupulus*.

HAB. Hedges, &c. Aug. ♀. *Stem twin., scabrous; leav. oppos., 3-5-lob., rough; fl. gr.*

HEXANDRIA.

582. SMILAX. Rough bind-weed. *Asparagææ*.

* *Stem frutescent.*

1. *S. Sarsaparilla*: stem prickly, slightly 4-angled; leaves unarmed, ovate-lanceolate, cuspidate, somewhat 5-nerved, glaucous beneath; peduncles longer than the petioles.

HAB. Low thickets. July. *Stem climbing; prickles scattered; ber. black, 3-seeded.*

2. *S. rotundifolia*: stem prickly, subterete; leaves unarmed, roundish-ovate, short-acuminate; cordate, 5-7-nerved; berries spherical.

HAB. Hedges, &c. June. *Stem climb.; branch quadrang.; ber. black; fl. umbel.*

3. *S. caduca*: prickly; leaves ovate, mucronate, membranaceous, 5-nerved; common peduncles scarcely longer than the petioles.

HAB. Fields and dry woods. June. *Climbing; stem subang. ; petiol. 5—6 lin. long.*

4. *S. Pseudo-china*: stem unarmed; leaves unarmed, those of the stem cordate, of the branches ovate-oblong, 5-nerved; peduncles very long.

HAB. Pine barrens and sandy fields. June. *Roots large, tuber. ; stem climb.*

5. *S. laurifolia*: prickly; branches unarmed; leaves coriaceous, elliptical or elliptical-lanceolate, obtuse, slightly acuminate, shining, 3-nerved; umbels on short peduncles.

HAB. Pine barrens. July. *Stem with few prickles; leav. very thick, smooth.*

6. *S. pandurata*: prickly; leaves ovate-panduriform, acuminate, 3-nerved; common peduncle twice as long as the petiole.

HAB. Sandy woods. July. *Leav. smooth and shining. A var. of the preceding?*

* * *Stems herbaceous, unarmed.*

7. *S. herbacea*: stem slightly angled, erect; leaves 5—7-nerved, acuminate, pubescent beneath, the lower ones alternate, upper verticillate and crowded; peduncles very long, compressed.

HAB. Moist shady places. June. *Stem 2—3 ft. high, nearly simp. ; ber. black.*

8. *S. peduncularis*: stem terete, climbing; leaves ovate, nearly round, cordate, acuminate, 9-nerved; umbels on very long peduncles.

HAB. Low grounds. June. *Stem climb. by tendrils, 5—8 ft. high; leav. smooth; fl. fetid.*

533. DIOSCOREA. Yam. *Asparagææ.*

1. *D. villosa*: leaves alternate, opposite and verticillate, cordate, acuminate, pubescent beneath, 9-nerved, the lateral nerves simple.

HAB. Hedges and woods. June. 4. *Climbing; ster. fl. in axill. panic., small.*

2. *D. quaternata*: leaves verticillate by fours, and alternate, cordate, acuminate, smooth on both sides, 7-nerved; the lateral nerves divided.

HAB. Dry soils. June. 4. *Climbing; leav. longer acum. than the preceding.*

584. GLEDITSCHIA. Honey-locust. *Leguminosæ*.

G. triacanthos: branches spiny; spines thick, triple and compound; leaflets oval and oblong; legumes many-seeded.

HAB. About plantations. June. *A middle-sized tree; spines very long; legumes falcate, long.*

β. inermis: branches unarmed.

HAB. With the preceding.

OCTANDRIA.

585. POPULUS. Poplar. *Salicinæ*.

1. *P. candicans*: leaves cordate, ovate, acuminate, obtusely and unequally serrate, white beneath, somewhat triply nerved, reticulately veined; petiole hairy; buds resinous; branches round.

HAB. Woods. April. *A small tree; leav. large; buds odorous.*

2. *P. tremuloides*: leaves roundish, abruptly acuminate, dentate-serrate, pubescent on the margin.

HAB. Woods. April. *A middle-sized tree; bark smooth; leav. thin, rather small.*

3. *P. hudsonica*: leaves rhomboid, with a very long acumination, dentate-serrate, smooth; young branches hairy.

HAB. Banks of rivers. April. *A large tree; branch. spreading; leav. 3—4 in. long.*

4. *P. grandidentata*: leaves roundish-ovate, acute, with large unequal sinuate teeth; younger ones villous.

HAB. Woods. April. *A middle-sized tree; young leav. downy.*

β. pendula: branches pendulous.

HAB. Mountains. Rare.

5. *P. heterophylla*: leaves roundish-ovate, with the sinus small, cordate, subauriculate, uncinately toothed; young ones tomentose.

586. DIOSPYROS. Persimmon. *Ebenaceæ*.

D. virginiana: leaves ovate-oblong, acuminate, smooth, reticulately veined; petioles pubescent; buds smooth.

HAB. Woods. June. *A small tree; fl. pale orange; fr. roundish, yell., astring.*

587. SHEPHERDIA. *Eleagni*.

S. canadensis: leaves oblong-ovate, nearly smooth above, stellately hairy and scaly beneath; the scales ferruginous and deciduous.

HAB. Borders of lakes and river banks. Aug. *A* shrub 6—8 ft. high; *fl.* clust., minute.

ENNEANDRIA.

588. ELODEA. *Haloragææ*.

E. canadensis: leaves verticillate by threes and fours, lanceolate, oblong or linear, serrulate; tube of the calyx filiform.

HAB. Creeks and still waters. Aug. *4*. Stem subm., dichot.; *fl.* minute, white.

DECANDRIA.

589. GYMNOCLADUS. Coffee-bean tree. *Leguminosæ*.

G. canadensis.

HAB. Woods. May—June. *A* middle-sized tree; leav. very large, bipinnate; *fl.* racem.

POLYANDRIA.

590. MENISPERMUM. Moon-seed. *Menispermaceæ*.

M. canadense: leaves peltate, cordate, rounded-angular; racemes compound; petals 8.

HAB. Woods and hedges. July. *4*. Climbing; petiol. long; racem. axill.; *fl.* small, yell.

MONADELPHIA.

591. JUNIPERUS. Juniper. *Coniferæ*.

J. communis: leaves ternate, spreading, mucronate, longer than the berry.

β. depressa: stems prostrate.

HAB. Dry woods. April—May. *A low spreading shrub ; leav. shining above, glauc. beneath.*

2. *J. virginiana*: upper leaves imbricate in four rows, ovate-lanceolate, pungently acute, appressed ; young ones acerose expanding ; trunk arboreous.

HAB. Dry rocky places. April. *A small tree ; leav. sometimes ternate ; ber., small, blue.*

3. *J. prostrata*: leaves imbricate in four rows, ovate, submucronate, glandular in the middle, appressed ; berries tubercular ; stem prostrate, creeping.

HAB. Gravelly shores. *A shrub with very long creeping branches ; berries longer than No. 2.*

592. TAXUS. Yew. *Coniferæ.*

T. canadensis: leaves linear, distichous, revolute on the margin ; sterile receptacle globose.

HAB. Shady rocks. April. *Shrub evergreen, 2—4 ft. high ; berries red.*

CRYPTOGAMIA.

FILICES.

* *Capsules furnished with an articulated elastic ring transversely opening.*

593. POLYPODIUM. *Sori* (small clusters of capsules) roundish, scattered. *Involucrum* 0.

594. HYPOPELTIS. *Sori* roundish, having a cup-shaped involucrum beneath, divided into 5—6 irregular segments. *Capsules* sessile.

595. WOODSIA. *Sori* roundish, having an involucrum beneath, which is cut into numerous capillary segments. *Capsules* pedicellate.

596. ASPIDIUM. *Sori* roundish or elliptical, scattered. *Involucrum* umbilicate, or opening on one side.

597. ASPLENIUM. *Sori* linear, straight, more or less transverse. *Involucrum* arising from the lateral veins, and opening towards the central nerve or rib.

598. **SCOLOPENDRIUM.** *Sori* linear, transverse, scattered. *Involucrum* double, occupying both sides of the *sorus*, superficial, and opening like a longitudinal suture.
599. **WOODWARDIA.** *Sori* oblong, distinct, straight, parallel with the ribs of the frond, on either side. *Involucrum* superficial, arched, opening inward.
600. **PTERIS.** *Sori* in a continued marginal line. *Involucrum* formed of the inflexed margin of the frond, opening inwards.
601. **ADIANTUM.** *Sori* oblong or roundish. *Involucra* membranaceous, arising from distinct portions of the frond turned in, opening inwards.
602. **CHEILANTHES.** *Sori* punctiform, distinct and marginal, each covered with a scale-like marginal *involucrum* opening inwards.
603. **HYMENOPHYLLUM.** *Sori* marginal. *Capsules* sessile, inserted upon a common cylindrical receptacle, within a 2-valved *involucrum* of the same texture as the frond; *valves* plane, exterior free.
604. **ONOCLEA.** *Sori* indeterminate. *Capsules* covering the whole lower surface of the frond. *Involucrum* resembling a berry, formed of the frond, opening, but not expanding.
605. **STRUTHIOPTERIS.** *Capsules* densely covering the back of the frond. *Involucrum* squamiform, marginal, opening inwards.
- * * *Capsules* destitute of a ring, vascular-reticulate, pellucid, radiate at the tip and substrate, longitudinally (and often externally) opening.
606. **OSMUNDA.** *Capsules* subglobose, pedicellate, striate, half-bivalved, paniculate. *Involucrum* 0.
607. **SCHIZÆA.** *Spikes* unilateral, flabellate, aggregate. *Capsules* subturbinate, striate longitudinally and radiate, opening laterally. *Involucrum* continuous, formed of the inflexed margin of the spikes.
608. **LYGODIUM.** *Capsules* in 2 series on the back of appendages to the frond, radiate-striate, or wrinkled, opening on the inner side, from the

base to the summit. *Involucrum* scale-like, covering each capsule.

*** *Capsules destitute of a ring, adnate at the base, subglobose, coriaceous, opaque, not cellular, semibivalved.*

609. OPHIOGLOSSUM. *Capsules* naked, upon an articulated distichous spike, transversely opening, 2-valved.

610. BOTRYCHIUM. *Capsules* subglobose, adnate to the rachis of the compound spike, distinct, naked, 1-celled; *valves* 2, connected behind, transversely opening.

LYCOPODINEÆ.

611. LYCOPODIUM. *Capsules* 1-celled, axillary, sessile; some of them 2-valved, filled with a farinaceous substance; others 3-valved, containing from 1—6 globose corpuscles.

EQUISETACEÆ.

612. EQUISETUM. *Fructification* terminal, spiked, consisting of peltate polygonous scales, on the under side of which are from 5—7 follicular involucre opening longitudinally on the inside. *Sporæ* included in the involucre, numerous, (green,) globose, with 4 filaments at the base which are dilated at the extremity.

RHIZOCARPA.

613. SALVINIA. *Involucre* imbricate, (4—9,) connate, resembling a unilocular capsule. *Sporæ* inserted on a central receptacle.

614. AZOLLA. Monoicous. *Sterile?* appendages by pairs, contiguous. *Involucrum* subglobose, resembling a unilocular capsule. *Sporæ* numerous, naked.

615. ISOETES. *Capsule* membranaceous, not opening, immersed at the base of the frond, 1-celled.

Seeds angular, attached to numerous filiform receptacles.

CRYPTOGAMIA.

FILICES.

593. POLYPODIUM. Polypody.

1. *P. vulgare*: fronds deeply pinnatifid; segments linear-lanceolate, obtuse, crenulate, approximate; the upper ones gradually smaller; caudex chaffy; stipe smooth.

HAB. Shady rocks. July. *Fronds* 8—12 in. high, smooth; segments 3—4 lin. broad, somewhat curved.

2. *P. hexagonopterum*: fronds bipinnatifid, rather smooth, circumference triangular, two of the lower divisions deflexed; segments lanceolate, obtuse, ciliate, the upper ones very entire, lower ones incisely crenate; the lowest adnate-decurrent; sori minute, solitary; stipe smooth.

HAB. Moist woods. Aug. *Fronds* 12 in. high, very broad; divisions acuminate, separate.

3. *P. connectile*: fronds bipinnatifid, ciliate, triangular; divisions opposite, contiguous, adnate; segments subelliptical; stipe chaffy; sori minute.

HAB. Woods. Aug. *Fronds* 12 in. high, oblong, triang.; segments closely approximate at base.

4. *P. Dryopteris*: fronds ternate, bipinnate, patulous and deflexed; segments obtuse, subcrenate; sori marginal; root filiform.

HAB. Rocky woods. Aug. *Fron*d 8—12 in. high, triang.; stipe slend.; sori at length subconfl.

594. HYPOPELTIS.

H. obtusa.

HAB. Rocky Woods. Aug. *Fronds* 8—14 in. high, bipinnate; divisions subremote; segments oblong, the lower ones crenate-dentate; rachis pubes. above; sori subconfluent.

595. WOODSIA.

W. ilvensis: fronds bipinnatifid; segments oblong, obtuse, the inferior ones repand, upper very entire, hairy beneath; sori submarginal, at length confluent; stipe villous above.

HAB. Rocks. July—Aug. *Fronds* 6—8 in. high, beneath chaffy and hairy, cespitose.

596. ASPIDIUM. Shield-fern.

* *Involucrum subumbilicate or reniform, attached near the centre of the sorus and opening on all sides.*

† *Fronds simply pinnate.*

1. *A. acrostichoides*: fronds pinnate; segments lanceolate, falcate, acute, ciliate-serrulate, auriculate on one side at the base, sessile, only the upper ones fructiferous; sori at length confluent; stipe chaffy.

HAB. Shady rocks. *Fronds* 15—18 in. high; seg. 1 in. long; fructiferous ones smaller.

†† *Fronde subbipinnate.*

2. *A. noveboracense*: frond pinnate, the divisions pinnatifid, linear-lanceolate; segments oblong, obtuse, entire, ciliate; sori marginal; stipe nearly smooth.

HAB. Damp woods. July. *Fronde* 1—2 ft. high; seg. mostly obtuse, pubes. beneath.

3. *A. Thelypteris*: frond pinnate; the divisions pinnatifid, linear-lanceolate, distinct at the base; segments ovate, acute, entire; sori marginal, contiguous, at length confluent.

HAB. Wet woods and swamps. *Fronde* a foot and a half high. Distinct from the preceding?

4. *A. cristatum*: *β. lancastriense*: frond lanceolate-ovate, smooth, pinnate; divisions subcordate, pinnatifid; segments triangular-oblong, spinulose-serrate; stipe nearly naked.

††† *Fronde doubly and triply pinnate.*

5. *A. Goldianum*: frond broad-ovate, smooth, bipin-

nate ; divisions lanceolate, pinnatifid ; segments oblong, obtuse, with remote uncinat serratures, the lowest decurrent on the rachis ; sori near the central nerve ; stipe and rachis somewhat chaffy.

HAB. Rocky woods. July. *Fron*d very broad, 2 ft. high ; invol. peltate.

6. *A. marginale* : frond bipinnate ; segments oblong, obtuse, decurrent, crenate, sinuate-repand at the base ; sori marginal ; stipe paleaceous.

HAB. Rocky places. July. *Fron*d 18 in. high, very smooth ; invol. large, umbilicate.

7. *A. spinulosum* : frond bipinnate ; divisions oblong, decurrent, smaller segments mucronately serrate ; stipe paleaceous ; involucrum glandular.

HAB. Rocky woods. July. *Fron*d broad, slender, smooth ; sori small.

8. *A. dilatatum* : fronds bipinnate ; divisions oblong, distinct, incisely pinnatifid ; segments mucronately serrate ; stipe chaffy ; involucrum smooth.

HAB. Shady woods. July. *Fron*d broad, 2 ft. high ; stipe slightly chaffy.

** *Involucrum* oblong, opening on one side.

9. *A. asplenoides* : frond bipinnate ; segments lanceolate, incisely serrate ; serratures 2—3-toothed ; sori oblong, lunate.

HAB. Moist woods. Two ft. high ; frond smooth ; sori at length subconfluent.

*** *Involucrum* hemispherical, bursting at the top.

10. *A. tenue* : frond bipinnate ; segments ovate, decurrent, dentate ; sori solitary, near the teeth of the leaflets.

HAB. Rocks. *Cespitose*, 6—8 in. high, slend. ; sori large ; invol. deciduous.

11. *A. bulbiferum* : frond bipinnate, lanceolate, attenuate above ; segments oblong, obtuse, serrate, the inferior ones pinnatifid ; rachis bulbiferous ; sori minute.

HAB. Rocky woods. *Fron*d narrow and long, 18 in. high ; bulbs ovate, compress., green.

12. *A. punctilobulum* : frond bipinnate, oblong ; divisions oblong, pinnatifid ; segments with the supe-

rior margin incisely dentate ; stipe somewhat hairy.

HAB. Shady woods. *Frond 18 in. high, thin ; sori minute, near the margin.*

597. ASPLENIUM. Spleenwort.

1. *A. rhizophyllum* : frond lanceolate, stipitate, subcrenate, auriculate-cordate at the base, the point very long, filiform, rooting.

HAB. Rocks. *Frond 6—10 in. long, rooting at the extrem., and producing new plants.*

- β. pinnatifidum* : frond pinnatifid ; lobes roundish-ovate, the lower ones crenate.

HAB. Rocks. *Larger than the common variety.*

2. *A. angustifolium* : frond pinnate ; divisions alternate, upper ones opposite, linear-lanceolate, somewhat repand, the base truncate on the upper side, rounded on the lower.

HAB. Low woods. July. *Frond 1—2 ft. high, the fertile one separate ; sori large.*

3. *A. ebenum* : frond pinnate ; divisions lanceolate, somewhat falcate, serrate, auriculate at the base ; stem smooth and polished.

HAB. Rocky woods. *Frond 12 in. high ; stipe slender., brown ; seg. 1 in. long, appearing spiral.*

4. *A. Trichomanes* : frond pinnate ; divisions roundish, crenate, obtusely cuneate, and entire at the base ; stipe polished and black.

HAB. Rocks. *Cespitose 6—8 in. high, delicate ; seg. 4—5 lin. long ; sori few, large.*

5. *A. thelypteroides* : frond pinnate ; divisions pinnatifid, lanceolate ; segments oblong, obtuse, serrate, confluent at the base ; sori in parallel oblique lines.

HAB. Shady woods. *About 2 ft. high ; frond ovate ; sori very numerous ; stipe smooth.*

6. *A. Ruta muraria* : frond bipinnate at the base, simply pinnate at top ; segments cuneate, obtusely dentate at the extremity.

HAB. Dry rocks. *Frond 2—3 in. high, rather coriaceous ; seg. subrhombic ; stipe smooth.*

7. *A. montanum* : frond smooth, bipinnate ; divisions lanceolate, pinnatifid ; segments 2—3-toothed.

HAB. Clefts of rocks on mountains.

598. *SCOLOPENDRIUM*. Hart's-tongue.

S. vulgare: frond ligulate, entire, cordate at the base.

HAB. Limestone rocks. *Frond* 8—10 in. long, *rachis* acute, *petiolate*; *sori* very large.

599. *WOODWARDIA*.

1. *W. onocleoides*: sterile frond pinnatifid; segments lanceolate, repand, slightly serrulate; fertile fronds pinnate; segments linear, entire, acute.

HAB. Swamps. *About* 1 ft. high; *fert. frond* with very narrow seg.; *sori* large, oblong.

2. *W. virginica*: frond very smooth, pinnate; divisions sessile, lanceolate, pinnatifid; segments oblong, obtuse, nearly entire; stipe smooth, nearly terete.

HAB. Swamps. *About* 2 ft. high; *frond* oblong; *sori* small, at length subconfluent.

600. *PTERIS*. Brake.

1. *P. Aquilina*: frond tripartite; divisions bipinnate; segments oblong-lanceolate, the lower ones pinnatifid, upper ones entire.

HAB. Woods. *Two—four* ft. high; *stipe* long, erect, smooth; *frond* ample, *circumf. triang.*

2. *P. atropurpurea*: frond pinnate; inferior divisions ternate or pinnate; segments lanceolate, obtuse, obliquely truncate or subcordate at the base.

HAB. Rocks. *A span* high; *frond* grayish green; *fructif. conspicuous*; *stipe* dark br., subpubes.

3. *P. caudata*: frond pinnately 3-parted; sterile divisions bipinnate, with the segments linear, long, obtuse, and very entire; fertile divisions pinnate; segments rather remote, the lower ones pinnatifid-dentate at the base.

HAB. Stony woods near creeks. *A small species*; *stipe* black and shining.

601. *ADIANTUM*. Maiden-hair.

- A. pedatum*: frond pedate; divisions pedate; segments rhomboid-oblong, sublunate, incisely lobed.

HAB. Rocky woods. *About 1 ft. high ; stipe slender, black, polish. ; frond ample ; segm. entire below.*

602. CHEILANTHES.

C. vestita : frond bipinnate, hairy on both sides ; segments oblong, obtuse, very entire ; stipe and rachis hairy.

HAB. Rocks. *About 4 in. high, covered with chaffy brown hair.*

603. HYMENOPHYLLUM.

H. ciliatum : frond pinnate ; lower divisions larger, upper ones gradually smaller, pinnatifid ; segments linear, obtuse, bifid, ciliate, hairy on the veins ; rachis and stipe winged, ciliate.

HAB. Trunks of trees.

604. ONOCLEA. Sensitive fern.

O. sensibilis : sterile frond, pinnate ; segments lacinate, the upper ones united ; fertile frond bipinnate, resembling a compound spike, with recurved globular segments.

HAB. Low grounds. *Fronds about a foot high ; sterile dilated, subtriang. ; fertile very narrow.*

♀. obtusiloba : divisions of the frond opposite, pinnatifid, with rounded lobes.

HAB. Low grounds. *Smaller than the preceding.*

605. STRUTHIOPTERIS.

S. pennsylvanica : sterile frond bipinnatifid ; segments entire, obtuse, the lowest elongated and recurved.

HAB. Low grounds. *About 2 ft. high ; fertile frond resembl. a compound spike ; seg. lin., num.*

606. OSMUNDA. Flowering fern.

1. *O. cinnamomea* : sterile frond pinnate ; divisions pinnatifid ; segments ovate, oblong-obtuse, very entire ; stipe woolly ; fertile frond bipinnate, woolly.

HAB. Low grounds. *Fronds 3—5 ft. high ; stipe*

covered with brown hair; fertile fr. spikelike, sometimes bearing a few leaves.

2. *O. interrupta*: frond pinnate, smooth; divisions pinnatifid; segments oblong, rather acute, entire; some of the intermediate divisions fructiferous.

HAB. Low grounds. Frond 3—4 ft. high; several central pairs of the divisions fertile, dark-br.

3. *O. regalis*: frond bipinnate; segments oblong, distinct, serrulate; raceme terminal compound.

HAB. Swamps. About 4 ft. high, smooth; panicle large, very compound.

607. SCHIZÆA.

- S. pusilla*: frond simple, linear, compressed, tortuous; spikes few, conglomerate at the summit of a long slender stipe.

HAB. Pine barrens. Aug. Fronds num., cespit. 2 in. long; stipe 4—5 in. long, filif.; spik. brown.

608. LYGODIUM.

1. *l. palmatum*: stem flexuous and climbing; fronds conjugate, cordate, palmate, with 5 lobes; lobes entire, obtuse; spikelets oblong-linear, in a compound terminal spike.

HAB. Shady banks of creeks. July. Frond 3—5 ft. high, smooth, slend.; fr. subterm.

609. OPHIOGLOSSUM. Adder's tongue.

1. *O. vulgatum*: spike cauline; frond oblong-ovate, obtuse, closely reticulate.

HAB. Wet meadows. June. About a span high; leaf solit. entire; spik. linear, 2-rowed.

2. *O. bulbosum*: spike cauline; frond subcordate-ovate, rather obtuse; root bulbous.

HAB. Low sandy grounds. About 6 in. high; frond 1½ in. long, 1 in. broad, reticulate.

610. BOTRYCHIUM.

1. *B. simplex*: stipe with a single frond above; frond subpinnate; segments 3—5, rarely 7, roundish obovate, sometimes lobed.

HAB. Dry woods. July. *About 4 in. high; frond very small, variable.*

2. *B. fumarioides*: stipe naked; frond smooth, radical, 3-parted, bipinnate; leaflets lunate, crenate; spikes bipinnate.

HAB. Shady woods. Aug. *A foot high; stipe rather thick; frond somewhat succul.*

- β. *obliquum*: scape with a single frond below; leaflets oblong-lanceolate, serrulate.

HAB. Shady low grounds. *Flowers later than the preceding.*

3. *B. dissectum*: scape with the frond near the base; frond tripartite-bipinnatifid; segments linear, 2-parted, 2-toothed at the extremity.

HAB. Shady woods. Aug. *A span high; frond much divided; spike compound.*

4. *B. virginicum*: somewhat hairy; scape bearing the frond in the middle; frond 3-parted, bipinnatifid; divisions incisely pinnatifid; segments obtuse, about 3-toothed; spikes decomposed.

HAB. Woods. July. *Nearly 2 ft. high; stipe mostly hairy; frond thin; spik. often geminate.*

- β. *gracile*: smooth; spike bipinnate, on a long slender peduncle.

HAB. Dry woods. *A span high; frond and spike delicate, very smooth.*

LYCOPODINEÆ.

611. LYCOPODIUM. Club-moss.

* *Spikes pedunculate.*

1. *L. carolinianum*: stem creeping; leaves distichous, spreading, lanceolate; peduncle erect, solitary, elongated, one-spiked; bracts sublanceolate.

HAB. Sandy swamps. Sept. *Stem appressed to the ground; pedunc. 3—4 in. long.*

2. *L. clavatum*: stem creeping, with ascending branches; leaves scattered, incurved, ending in hairs; spikes geminate or ternate, cylindrical, pedunculate; scales ovate, acuminate, coarsely dentate.

HAB. Woods. July. *Stem long, trailing; leaves ending in a diaphanous bristle, entire or serrul.*

3. *L. complanatum*: stem trailing, with dichotomous branches; leaves 2-rowed, connate, superficial ones solitary; peduncles elongated, supporting 4 cylindrical spikes.

HAB. Woods. Aug. Stem 2—10 ft. long; branch. repeatedly forked; leav. small, pung.

* * Spikes sessile; leaves surrounding the stem.

4. *L. dendroideum*: erect; branches alternate, crowded, dichotomous, erect; leaves linear-lanceolate. in 6 equal rows; spikes numerous, solitary, sessile.

HAB. Woods. July. About a span high; branch. numerous; spikes 3—4 on each plant.

- β. *obscurum*: branches spreading; plant mostly 1-spiked.

HAB. Woods. Branch. diverging, loose; spike as in the preceding.

5. *L. annotinum*: stem creeping; branches ascending, dichotomously branched; branchlets simple; leaves in 5 rows, linear-lanceolate, mucronate, serrulate, spreading; spikes oblong-cylindrical, solitary, sessile, terminal.

HAB. Rocky and mountain woods. Aug. About a span high; branch. 4—8; spik. 1 in. long.

6. *L. inundatum*: stem creeping; branches simple, solitary, erect, with a single sessile leafy spike at the extremity; leaves linear, scattered, acute, entire, curved upwards.

HAB. Low wet grounds. July. Stem 3—4 in. long; flowering branch. subradical.

7. *L. selaginoides*: stem creeping; branches ascending, simple; leaves scattered, lanceolate, somewhat spreading, ciliate-denticulate; spikes terminal, solitary.

HAB. Mossy woods. July.

3. *L. alopecuroides*: stem creeping, somewhat branched; branches nearly simple, elongated, ascending, with a sessile leafy spike at the summit; leaves linear-subulate, ciliate-dentate at the base, spreading.

HAB. Sandy and sphagnous swamps. Oct. Stem

long; branches densely leaved, terete, 8—12 in. high.

9. *L. rupestre*: stem creeping, with ascending subdivided branches; leaves scattered, imbricate, linear-lanceolate, ciliate, ending in hairs; spikes solitary, sessile, quadrangular.

HAB. Rocks. July. Stem 2—3 in. long; branch, numerous, somewhat incurved; plant grayish-green.

*** Spikes sessile; leaves distichous.

10. *L. apodum*: leaves 2-rowed, roundish-ovate, acute, denticulate, flat, acuminate; spikes terminal, sessile, nearly solitary, quadrangular.

HAB. Wet rocky places. July. Resembling a moss, or *Jungermannia*; creeping.

**** Fructification axillary.

11. *L. lucidulum*: leaves in 8 rows, linear-lanceolate, denticulate, acute, spreading-reflexed; stem ascending, bifid.

HAB. Woods. July. Stem 3—12 in. long, nearly erect, simp. or bifid, dark green.

12. *L. Selago*: stem dichotomously branched, erect, fastigiate; leaves scattered in 6 equal rows, linear-lanceolate, acuminate, entire, imbricate, rigid; fruit axillary.

HAB. High mountains. About 6 in. high; leaves densely imbricated.

EQUISETACEÆ.

612. EQUISETUM. Horse-tail.

1. *E. hyemale*: stem simple, erect, very rough, naked; sheaths whitish, black at the base and summit.

HAB. Woods and marshes. April. Stem 2—3 ft. high, slender, pale green; spike terminal, mostly solitary.

2. *E. arvense*: sterile stems decumbent, with simple branches, which are rough and quadrangular; fertile stem erect, simple; sheaths simple, cylindrical, incisely-dentate.

HAB. Boggy grounds. April. *A span high; sheaths of the fertile stems swelling; teeth black.*

3. *E. sylvaticum*: sterile and fertile stems with compound scabrous deflexed branches.

HAB. Woods and low grounds. May. *Branch. verticill., curved downwards; sheaths loose.*

4. *E. limosum*: stems branched upwards, with the branches about 12 in a whorl, simple, pentagonal, smooth.

HAB. Borders of ponds, &c. July. *Stems 2—4 ft. high; sheaths with narrow acute black teeth.*

5. *E. variegatum*: cespitose; stems somewhat branched at the base, naked, scabrous, filiform; sheaths 3-toothed, blackish; teeth membranaceous, lanceolate, whitish, deciduous at the tips.

HAB. Borders of lakes. Aug. *Stem 3—6 in. long, 5-angled; rough with siliceous dots.*

RHIZOCARPA.

613. SALVINIA.

S. natans: leaves ovate, subcordate, obtuse, with fascicles of hairs beneath, scabrous.

HAB. Lakes and still waters. *Floating.*

614. AZOLLA.

A. caroliniana: leaves distichous, imbricate, ovate-oblong, obtuse, spreading.

HAB. Lakes and still waters. *Floating; resembling a Jungermannia; leav. reddish beneath.*

615. ISOETES.

I. lacustris.

HAB. Bottom of lakes. *Leav. all radical, 2—5 in. long, subulate, fleshy, semicylindrical.*

[OMITTED.]

435. FUMARIA. Fumitory. *Fumariaceæ*.

F. officinalis: silicles globose-retuse: fructiferous pedicels erect, twice as long as the bract; racemes rather loose; stems erect; leaves decomposed, with linear lobes.

HAB. Sandy fields. ☉. July—Aug. *Fl. purp.* §.

INDEX OF THE GENERA.

	PAGE.		PAGE.
Acalypha.....	361	Arabis.....	250
Acer.....	169	Aralia.....	141
Achillea.....	308	Arbutus.....	178
Acnida.....	373	Arctium.....	280
Aconitum.....	218	Arenaria.....	192
Acorus.....	156	Arethusa.....	321
Actæa.....	217	Argemone.....	216
Actinomeris.....	313	Aristida.....	49
Adiantum.....	384	Aristolochia.....	323
Æschynomene.....	270	Arnica.....	305
Æsculus.....	164	Aronia.....	202
Agave.....	151	Arrhenatherum.....	63
Agrimonia.....	200	Artemisia.....	287
Agropyron.....	65	Arum.....	358
Agrostemma.....	194	Arundo.....	53
Agrostis.....	50	Asarum.....	324
Aira.....	64	Asclepias.....	125
Alchemilla.....	86	Ascyrum.....	219
Aletris.....	150	Asimina.....	222
Alisma.....	163	Asparagus.....	155
Allium.....	149	Aspidium.....	381
Alnus.....	350	Asplenium.....	383
Alopecurus.....	53	Aster.....	291
Alyssum.....	247	Astragalus.....	264
Althæa.....	255	Atheropogon.....	66
Amaranthus.....	352	Atriplex.....	129
Amaryllis.....	149	Avena.....	64
Ambrosia.....	353	Azalea.....	110
Ammannia.....	86	Azolla.....	391
Amorpha.....	262		
Amphicarpa.....	270	Baccharis.....	288
Anagallis.....	102	Baptisia.....	188
Andromeda.....	181	Barbarea.....	251
Andropogon.....	73	Bartonia.....	85
Anemone.....	222	Bartsia.....	244
Angelica.....	137	Berberis.....	148
Anthemis.....	307	Betula.....	355
Anthoxanthum.....	54	Bidens.....	311
Antirrhinum.....	240	Bignonia.....	240
Anychia.....	123	Blitum.....	14
Apargia.....	276	Boehmeria.....	350
Apios.....	270	Boltonia.....	307
Aplectrum.....	322	Botrychium.....	386
Apocynum.....	124	Brachyelytrum.....	55
Aquilegia.....	218	Brasenia.....	228

Briza.....	56	Cnidium.....	134
Bromus.....	63	Collinsia.....	241
Buchnera.....	240	Commelina.....	35
Cacalia.....	286	Comptonia.....	349
Cactus.....	198	Conium.....	136
Cakile.....	246	Conostylis.....	150
Calla.....	358	Convallaria.....	153
Callitriche.....	14	Convolvulus.....	107
Calopogon.....	321	Conyza.....	288
Caltha.....	224	Coptis.....	225
Calycanthus.....	211	Corallorhiza.....	322
Camelina.....	248	Coreopsis.....	312
Campanula.....	111	Cornus.....	82
Cardamine.....	248	Corydalis.....	259
Carex.....	333	Corylus.....	360
Carpinus.....	356	Cratægus.....	201
Carya.....	357	Crotalaria.....	262
Cassia.....	187	Crotonopsis.....	352
Castanea.....	355	Crypsis.....	53
Catalpa.....	20	Crypta.....	24
Caulinia.....	330	Cucubalus.....	190
Ceanothus.....	119	Cunila.....	22
Celastrus.....	120	Cuphea.....	200
Celtis.....	132	Cupressus.....	361
Cenchrus.....	46	Cuscuta.....	128
Cephalanthus.....	78	Cynodon.....	54
Cerastium.....	193	Cynoglossum.....	102
Ceratochloa.....	62	Cyperus.....	42
Ceratophyllum.....	354	Cypripedium.....	322
Cercis.....	188	Dactylis.....	62
Chærophyllum.....	354	Dalibarda.....	208
Cheilanthes.....	385	Danthonia.....	62
Chelone.....	243	Datura.....	110
Chelidonium.....	216	Daucus.....	135
Chenopodium.....	130	Delphinium.....	218
Chionanthus.....	17	Dentaria.....	248
Chrysocoma.....	286	Dianthus.....	190
Chrysosplenium.....	189	Diapensia.....	110
Chrysanthemum.....	307	Diervilla.....	113
Cichorium.....	276	Digitaria.....	72
Cicuta.....	135	Diarrhæna.....	62
Cimicifuga.....	219	Diodia.....	80
Cinna.....	52	Dioscorea.....	374
Circæa.....	24	Diospyros.....	375
Cissus.....	121	Dipsacus.....	78
Claytonia.....	119	Dirca.....	170
Clematis.....	222	Dodecatheon.....	104
Cleome.....	252	Dolichos.....	
Clethra.....	187	Draba.....	247
Clinopodium.....	236	Dracocephalum.....	236
Clitoria.....	271	Drosera.....	142
Cnicus.....	281	Dryas.....	208

Dulichium	42	Gymnocladus	376
Echium	101	Gymnopogon	54
Elephantopus	314	Gyromia	161
Eleusine	65	Habenaria	317
Elodea	376	Hamamelis	86
Elymus	66	Hamiltonia	123
Empetrum	372	Hedeoma	22
Epiphagus	244	Hedyotis	81
Epigæa	184	Hedysarum	267
Epilobium	168	Helenium	308
Equisetum	389	Helianthemum	215
Erigeron	289	Helianthus	308
Eriocaulon	350	Heliopsis	308
Eriophorum	45	Helonias	159
Ervum	264	Hemerocallis	151
Eryngium	132	Hemianthus	20
Erythronium	152	Hepatica	225
Euchroma	243	Heracleum	137
Eupatorium	283	Herpestis	239
Euphorbia	331	Hesperis	281
Evonymus	119	Heteranthera	36
Exacum	85	Heuchera	129
Fagus	360	Hibiscus	255
Fedia	34	Hieracium	279
Festuca	60	Hierochloa	77
Floerkea	149	Hippuris	13
Fragaria	211	Holcus	71
Frasera	85	Holosteum	74
Fraxinus	371	Hordeum	73
Fuirena	45	Hottonia	104
Fumaria	—	Houstonia	81
Galactia	271	Hudsonia	215
Galeopsis	234	Humulus	373
Galium	78	Hydrangea	188
Gaultheria	179	Hydrastis	224
Gaura	168	Hydrochloa	354
Genista	262	Hydrocotyle	133
Gentiana	127	Hydrophyllum	105
Geranium	254	Hymenophyllum	385
Gerardia	241	Hyoscyamus	107
Geum	208	Hypericum	219
Gillenia	204	Hypoxis	150
Glaux	124	Hypopeltis	380
Glechoma	234	Hyssopus	233
Gleditschia	375	Jeffersonia	170
Glyceria	55	Ilex	87
Gnaphalium	288	Impatiens	115
Gonolobus	125	Inula	290
Goodyera	319	Ipomœa	108
Gratiola	19	Iris	35
		Isanthus	231

Isnardia	83	Lygodium	386
Isoetes	393	Lysimachia	102
Itea	115	Lythrum	200
Juglans	357		
Juncus	156	Magnolia	221
Juniperus	376	Malaxis	321
Justicia	20	Malva	255
Iva	314	Mariscus	42
		Marrubium	235
Kalmia	182	Martynia	243
Kœleria	59	Meconopsis	216
Krigia	280	Medicago	271
Kuhnia	283	Melampyrum	244
Kyllingia	37	Melanthium	159
		Melica	66
Lachnanthes	35	Melilotus	264
Lactuca	278	Melothria	361
Lamium	233	Menispermum	376
Lathyrus	263	Mentha	233
Laurus	174	Menyanthes	104
Lechea	74	Menziesia	169
Lecontia	358	Mikania	286
Ledum	186	Milium	48
Leersia	47	Mimulus	242
Leiophyllum	187	Mitchella	81
Lemna	24	Mitella	189
Leontice	148	Mollugo	74
Leontodon	277	Momordica	361
Leonurus	234	Monarda	22
Lepidium	248	Monotropa	185
Leptandra	19	Morus	352
Lespedeza	266	Muhlenbergia	49
Liatris	282	Myosotis	101
Ligusticum	136	Myrica	372
Ligustrum	17	Myriophyllum	354
Lilium	152	Myrrhis	135
Limosella	239		
Lindernia	19	Nasturtium	251
Linnæa	82	Narthecium	151
Linum	142	Nelumbium	228
Liquidambar	357	Neottia	320
Liriodendron	221	Nepeta	233
Listeria	320	Nicotiana	107
Lithospermum	100	Nuphar	217
Lobelia	112	Nymphæa	218
Lolium	64	Nyssa	272
Lonicera	113		
Ludwigia	83	Obolaria	85
Lupinus	252	Oenanthe	
Luzula	158	Oenothera	166
Lycopodium	387	Onopordum	280
Lycopsis	102	Onoclea	385
Lycopus	21	Onosmodium	101

<i>Ophioglossum</i>	386	<i>Populus</i>	375
<i>Orchis</i>	316	<i>Portulacca</i>	216
<i>Origanum</i>	236	<i>Potamogeton</i>	88
<i>Ornithogalum</i>	151	<i>Potentilla</i>	209
<i>Ornus</i>	17	<i>Prenanthes</i>	277
<i>Orobanche</i>	244	<i>Primula</i>	103
<i>Orontium</i>	155	<i>Prinos</i>	148
<i>Oryzopsis</i>	46	<i>Proserpinaca</i>	74
<i>Osmunda</i>	385	<i>Prunella</i>	236
<i>Ostrya</i>	355	<i>Prunus</i>	198
<i>Oxalis</i>	194	<i>Psamma</i>	53
<i>Oxycoccus</i>	168	<i>Ptelea</i>	86
<i>Panax</i>	129	<i>Pteris</i>	384
<i>Panicum</i>	66	<i>Pterospora</i>	185
<i>Parietaria</i>	352	<i>Pulmonaria</i>	100
<i>Parnassia</i>	141	<i>Pycnanthemum</i>	235
<i>Paspalum</i>	47	<i>Pyrola</i>	185
<i>Passiflora</i>	253	<i>Pyrus</i>	203
<i>Pastinaca</i>	137	<i>Quercus</i>	357
<i>Pedicularis</i>	242	<i>Ranunculus</i>	225
<i>Penthorum</i>	195	<i>Rapianus</i>	252
<i>Pentstemon</i>	243	<i>Rhamnus</i>	120
<i>Peplis</i>		<i>Rhexia</i>	165
<i>Periploca</i>	124	<i>Rhododendron</i>	183
<i>Phacelia</i>	106	<i>Rhodora</i> ..	184
<i>Phalangium</i>	151	<i>Rhus</i>	140
<i>Phalaris</i>	54	<i>Rhynchospora</i>	41
<i>Phaseolus</i>	270	<i>Ribes</i>	121
<i>Phleum</i>	54	<i>Rivina</i>	86
<i>Phlox</i>	108	<i>Robinia</i>	271
<i>Phryma</i>	238	<i>Rochelia</i>	102
<i>Phyllanthus</i>	361	<i>Rosa</i>	205
<i>Phragmites</i>	55	<i>Rubus</i>	206
<i>Physalis</i>	110	<i>Ruellia</i>	240
<i>Phytolacca</i>	196	<i>Rudbeckia</i>	310
<i>Pinus</i>	359	<i>Rumex</i>	162
<i>Piptatherum</i>	48	<i>Ruppia</i>	89
<i>Pisum</i>	263	<i>Sabbatia</i>	105
<i>Plantago</i>	84	<i>Sagina</i>	87
<i>Platanus</i>	355	<i>Sagittaria</i>	355
<i>Poa</i>	56	<i>Salicornia</i>	13
<i>Podophyllum</i>	217	<i>Salix</i>	365
<i>Podostemum</i>	332	<i>Salsola</i>	131
<i>Pogonia</i>	320	<i>Salvia</i>	23
<i>Polanisia</i>	252	<i>Salvinia</i>	390
<i>Polemonium</i>	109	<i>Sambucus</i>	139
<i>Polygala</i>	260	<i>Samolus</i>	104
<i>Polygonum</i>	171	<i>Sanguinaria</i> ...	217
<i>Polymnia</i>	314	<i>Sanguisorba</i>	82
<i>Polypodium</i>	350	<i>Sanicula</i>	133
<i>Polypogon</i>	52		
<i>Pontederia</i>	150		

Saponaria	189	Swertia	85
Sarracenia	217	Symphoria	114
Saururus	163	Symplocarpus	86
Saxifraga	188		
Scheuchzeria	160	Talinum	216
Schizæa	386	Tanacetum	287
Schœnus	41	Taxus	377
Schollera	36	Tephrosia	271
Scirpus	37	Teucrium	232
Schwalbea	243	Thalictrum	223
Scleria	349	Thapsia	138
Scleranthus	190	Thesium	123
Scrophularia	239	Thlaspi	246
Scutellaria	236	Thuya	361
Secale	65	Tiarella	189
Sedum	195	Tilia	214
Senecio	305	Tillæa	87
Sesuvium	202	Tipularia	321
Setaria	72	Tofieldia	160
Shepherdia	376	Tradescantia	147
Sibbaldia	142	Trichochloa	52
Sicyos	362	Trichodium	49
Sida	254	Trichostema	238
Silene	190	Tricuspis	60
Silphium	313	Trientalis	164
Sinapis	252	Trifolium	265
Sison	134	Triglochin	160
Sisymbrium	251	Trillium	161
Sisyrinchium	36	Triosteum	115
Sium	136	Triphora	321
Smilax	373	Tripsacum	349
Smyrnium	134	Trisetum	62
Solanum	111	Triticum	65
Solidago	300	Trollius	225
Sonchus	278	Tussilago	306
Sorbus	202	Typha	333
Sparganium	333		
Sparganophorus	287	Ulmus	132
Spartina	46	Uniola	55
Spergula	193	Uralespis	60
Spermacoce	80	Urtica	351
Spigelia	106	Utricularia	29
Spiræa	203	Uvularia	153
Stachys	234		
Staphylea	141	Vaccinium	179
Statice	142	Valisneria	365
Stellaria	191	Veratrum	159
Stipa	48	Verbascum	106
Streptopus	153	Verbena	238
Strophostyles	270	Verbesina	307
Struthiopterus	385	Vernonia	283
Stylosanthes	266	Veronica	17
Subularia	248	Viburnum	138

Vicia	263	Xerophyllum	160
Villarsia	104	Xylosteum	114
Viola	115	Xyris	36
Viscum	372		
Vitis	120	Zannichellia	330
		Zanthorhiza	143
Woodsia	381	Zanthoxylum	373
Woodwardia	384	Zapania	239
		Zizania	350
Xanthium	353	Zostera	334

INDEX

OF THE

PRINCIPAL SYNONYMS.

- Acer striatum*. du Roi. See *A. pennsylvanicum*.
Actæa brachypetala. D. C. *A. alba*.
 ——— *racemosa*. L. *Cimicifuga racemosa*.
Agrostis cinna. L. *Cinna arundinacea*.
 ——— *diffusa*. Muhl. *A. sylvatica*.
 ——— *filiformis*. Muhl. *A. lateriflora*. β .
 ——— *glauca*. Muhl. *Arundo coarctata*.
 ——— *mexicana*. Muhl. *A. lateriflora*.
Aira mollis. Muhl. } *Kæleria pennsylv.*
 ——— *pennsylvanica*. Muhl. } *K. truncata*.
 ——— *truncata*. Muhl. } *A. geniculatus*.
Alopecurus aristul. Mx. *Sison capillaceus*.
Ammi capillaceum. Mx. *Cissus hederacea*.
Ampelopsis quinquef. Mx. *Leiophyllum buxif.*
Ammyrsine buxifol. Ph. *A. racemosa*.
Andromeda paniculata. Walt. *A. ligustrina*.
 ——— *paniculat.* Willd. *Gymnopogon*.
Andropogon ambiguum. Mx. *A. scoparium*.
 ——— *purpurasc.* Muhl. *Thalictrum anemonoid.*
Anemone thalictroides. L. *Hepatica triloba*.
 ——— *hepatica*. L. *Gymnopogon*.
Anthopogon lepturoides. N. } *A. rubra*. β .
Arenaria marina. Sm. } *Pogonia ophiogloss.*
 ——— *canadensis*. Pers. } *Triphora pendula*.
Arethusa ophioglossoid, &c. *A. purpurascens*.
 ——— *pendula*. Sw. *A. arbutifol.* β .
Aristida racemosa. Muhl. *Lecontia virginica*.
Aronia melanocarpa. Ell. *A. canadensis*.
Arum virginicum. L. *Psamma arenaria*.
Arundo agrostoides. Ph. *Phragmites*.
 ——— *arenaria*. L. *A. viridiflora*. α .
 ——— *Phragmites* L. ——— β .
Asclepias obovata. Ell. *Hypopeltis obtusa*.
 ——— *lancifolia*. Ives. *A. Goldianum*.
Aspidium obtusum. Willd. *A. trichomanes*.
 ——— *filix mas*. Ph. *Clematis verticillaris*.
Asplenium melanocaulon. W. *Arrhenatherum avenen.*
Atragene americana. Sims. *Arr. pennsylvanicum*.
Avena elatior. L. *Rhododendron*.
 ——— *pennsylvanica*. Muhl.
Azalea nudiflora, &c.

<i>Bartsia coccinea</i> . L.	See	<i>Euchroma coccinea</i> .
<i>Batschia canescens</i> . Mx.		<i>Lithospermum canesc.</i>
<i>Boottia sylvestris</i> . Big.		<i>Potentilla coarctata</i> .
<i>Briza canadensis</i> . Mx.		<i>Poa canadensis</i> .
<i>Callitriche aquatica</i> . Big.		<i>C. verna</i> .
<i>Caprifolium dioicum</i> , &c.		<i>Lonicera</i> .
<i>Caulophyllum thalict.</i> Mx.		<i>Leontice thalictroid</i> .
<i>Centaurella panicul.</i> Mx.	}	<i>Bartonia</i> .
————— <i>autumnale</i> . Ph.		<i>C. nutans</i> .
<i>Cerastium glutinosum</i> . N.		<i>Myrrhis canadensis</i> .
<i>Chaerophyll. canad.</i> Pers.		<i>M. Claytoni</i> .
————— <i>Claytoni</i> . Pers.		<i>Meconopsis diphyll.</i>
<i>Chelidonium diphyll.</i> Mx.		<i>Pyrola</i> .
<i>Chimaphila maculat.</i> , &c.		<i>Sabbatia</i> .
<i>Chironia angularis</i> , &c.		<i>Helianthemum</i> .
<i>Cistus canadensis</i> . L.		<i>Polanisia graveolens</i> .
<i>Cleome dodecandra</i> . Ph.		<i>Thesium umbellat.</i>
<i>Comandra umbellata</i> . N.		<i>Potentilla</i> .
<i>Comarum palustre</i> . L.		<i>Actinomeris squarrosa</i> .
<i>Cereopsis alternifolia</i> . L.		<i>C. spithameus</i> .
<i>Convolvulus stans</i> . Mx.		<i>C. camphorata</i> .
<i>Conyza marilandica</i> . Mx.		<i>Hedeoma pulegioides</i> .
<i>Cuxila pulegioides</i> . L.		<i>Nelumbium</i> .
<i>Cyanus luteus</i> . Salisb.		<i>Calopogon</i> .
<i>Cymbidium pulchell.</i> W.		<i>Corallorhiza</i> .
————— <i>odontorrhizon</i> , &c.		<i>Aplectrum</i> .
————— <i>hyemale</i> . W.		<i>C virginicum</i> .
<i>Cynogloss. amplexic.</i> Mx.		<i>C. Nuttallii</i> .
<i>Cyperus cespitosus</i> . Tor.		<i>C. dentatus</i> .
————— <i>parviflorus</i> . Muhl.		<i>C. inflexus</i> .
————— <i>uncinatus</i> . Ph.		
<i>Dicksonia pilosius</i> . W.		<i>Aspid. punctilobulum</i> .
<i>Digitaria paspalod.</i> Mx.		<i>D. glabra</i> .
<i>Dilatris tinctoria</i> . Ph.		<i>Lachnanthes</i> .
<i>Dioscorea glauca</i> . Muhl.		<i>D. quaternata</i> .
<i>Elodia virginica</i> . Ph.		<i>Hypericum virginicum</i> .
<i>Epipactis convallarioid</i> , &c.		<i>Listeria</i> .
<i>Equisetum scirpoides</i> . Mx.		<i>E. variegatum</i> .
<i>Eriophorum cespitosum</i> . Ph.		<i>E. vaginatum</i> .
<i>Euphorbia depressa</i> . Tor.		<i>E. maculata</i> .
<i>Erysimum officinale</i> . L.		<i>Sisymbrium officinale</i> .
<i>Festuca diandra</i> . Mx.		<i>Diarrhena americana</i> .
————— <i>fluitans</i> . L.		<i>Glyceria</i> .
————— <i>polystachia</i> . Mx.		<i>F. fascicularis</i> .
————— <i>unioloides</i> . Willd.		<i>Ceratochloa</i> .
<i>Galium strictum</i> . Ed.	}	<i>G. boreale</i> .
————— <i>septentrionale</i> , R. & S.		<i>G. quercifolia</i> .
<i>Gerardia glauca</i> . Ed.		<i>G. virginica</i> .
<i>Gratiola neglecta</i> . Tor.		

<i>Glycine monoica</i> . L.	See	<i>Amphicarpa</i> .
—— <i>helvolus</i> . Muhl.		<i>Strophostyles</i> .
<i>Heritiera tinctoria</i> . Bosc.		<i>Lachnanthes</i> .
<i>Heteranthera gramin.</i> Wahl.		<i>Schollera</i> .
<i>Hippophæ canadens.</i> W.		<i>Shepherdia</i> .
<i>Holcus fragrans.</i> W.		<i>Hierochloa</i> .
<i>Hydropeltis purpurea.</i> Mx.		<i>Brasenia</i> .
<i>Hypericum corymbos.</i> W.		<i>H. punctatum</i> .
<i>Ictodes foetida.</i> Big.		<i>Symplocarpus</i> .
<i>Iris gracilis.</i> Big.	}	<i>I. virginica</i> .
—— <i>prismatica.</i> Ph.		
<i>Juglans alba</i> , &c.		<i>Carya</i> .
<i>Juncus campestris</i> , &c.		<i>Luzula</i> .
<i>Juniperus repens.</i> N.		<i>J. prostrata</i> .
<i>Lathyrus maritimus.</i> Big.		<i>Pisum maritim.</i>
<i>Ledum buxifolium.</i> Ait.		<i>Leiophyllum</i> .
<i>Linnetis juncea</i> , &c.		<i>Spartina</i> .
<i>Lespedeza polystachya.</i> Mx.		<i>L. hirta</i> .
—— <i>capitata.</i> Mx.		<i>L. frutescens</i> .
<i>Lobelia paludosa.</i> Nut.		<i>L. Dortmanna</i> .
—— <i>gracilis.</i> N.		<i>L. Nuttallii</i> .
<i>Medeola virginica.</i> L.		<i>Gyromia</i> .
<i>Micropetalum gramin.</i> Mx.		<i>Stellaria longifol.</i>
—— <i>lanceolatum.</i> Mx.		—— <i>lanceolatum.</i>
<i>Nymphæa advena</i> , &c.		<i>Nuphar</i> .
<i>Neottia pubescens</i> , &c.		<i>Goodyera</i> .
<i>Oldenlandia glomerat.</i> Mx.		<i>Hedyotis</i> .
<i>Orobanche americana.</i> W.		<i>Epiphagus</i> .
<i>Orchis ciliaris</i> , &c.		<i>Habenaria</i> .
—— <i>discolor.</i> Ph.		<i>Tipularia</i> .
<i>Oryzopsis melanocarpa.</i> Muhl.		<i>Piptatherum nigrum</i> .
<i>Panicum viride</i> , &c.		<i>Setaria</i> .
<i>Pedicularis serotina.</i> Muhl.		<i>P. pallida</i> .
<i>Peplis americana.</i> Ph.		<i>Crypta minima</i> .
<i>Phaseolus trilobus.</i> Mx.		<i>Strophostyles angulosa</i> .
<i>Poa quinquefida.</i> Ph.	}	<i>Tricuspis</i> .
—— <i>seslerioides.</i> Mx.		
<i>Polypodium calcareum.</i> W.		<i>P. Dryopteris</i> .
<i>Porcelia triloba.</i>		<i>Asimina triloba</i> .
<i>Potentilla floribunda.</i> Ph.		<i>P. fruticosa</i> .
<i>Pulmonaria maritima.</i> L.	}	<i>Lithospermum marit</i>
—— <i>parriflora.</i> Mx.		
<i>Pyrola chlorantha.</i> N.		<i>P. asarifolia</i> .
<i>Pyrus arbutifolia</i> , &c.		<i>Aronia</i> .
<i>Queria canadensis.</i> L.		<i>Anychia dichotoma</i> .

- Rhynchospora longirost.* Mx. See *R. laxa*.
Rosa suaveolens. Ph. *R. Rubiginosa.*
Rubus procumbens. Muhl. *R. trivialis.*
- Salicornia virginica.* L. *S. herbacea.*
Sarothra gentianoid. L. *Hypericum Sarothra.*
Schoenus albus, &c. *Rhynchospora.*
Scirpus cyperiform. Muhl. *Cyperus mariscoid.*
—— robustus. Ph. *S. macrostachyos.*
—— trichodes. Muhl. *S. acicularis.*
Selinum canadense. Mx. *Cnidium canadensis.*
Serpicula verticill. Muhl. *Elodea.*
Sisymbrium officinale. *Nasturtium.*
Sium rigidius. L. *Pastinaca rigida.*
—— ambiguum. N. *—— ambigua.*
Smilacina borealis, &c. *Convallaria.*
Smyrniun atropurp. Lam. *Cnidium atropurp.*
—— trifoliatum. N. *S. cordatum.*
—— aureum. L. *Sison aureus.*
Smyrniun integrifol. L. *Sison integrifolius.*
Spartina polystachya. M. *S. cynosuroides.*
Spergulastrum. Mx. *Stellaria.*
Spiræa stipulacea, &c. *Gillenia.*
Stipa sericea. Mx. *Trichochloa capillaris.*
Stylophorum diphyll. Nutt. *Meconopsis.*
Swertia corniculata. Ph. *S. deflexa.*
- Trichophorum cyperin.* Pers. *Scirpus erioph.*
Trientalis Europea. Mx. *T. americana.*
Trillium pictum. Ph. *T. erythrocarpum.*
Triticum repens, &c. *Agropyron.*
Thlaspi Bursa pastor. L. *Krigia amplex.*
Troximon virginicum. Pers. *Arabis.*
Turritis hirsuta, &c.
- Udora canadensis.* Nutt. *Elodea canadensis.*
Uniola distichophyll. *U. spicata.*
Utricularia ceratophyl. Mx. *U. inflata.*
Uvularia amplexif., &c. *Streptopus.*
- Veratrum luteum.* L. *Helonias dioica.*
Veronica virginica. L. *Leptandra.*
Viburnum opulus. Mx. *V. oxycoccus.*
Vicia pusilla. Willd. *Ervum tetrasperm.*
—— Mitchilli. Raf. *—— hirsutum.*
Viola bicolor. Ph. *V. tenella.*
—— debilis. Ph. *V. Muhlenbergii.*
—— striata. Ait. *V. ochroleuca.*
- Windsoria poæformis.* *Tricuspis.*
—— pallida. Spr. *Poa dentata.*
- Xanthium maculatum.* Raf. } *X. macrocarpon.*
—— orientale. }
Zizania fluitans. Mx. *Hydrochloa.*

New York Botanical Garden Library

QK117 .T6 c.2

Torrey, John/A compendium of the flora o

gen

3 5185 00125 0925