A

BOTANICAL DICTIONARY,

BEING

A TRANSLATION FROM THE FRENCH

OF

LOUIS-CLAUDE RICHARD,

PROFESSOR OF BOTANY AT THE MEDICAL SCHOOL IN PARIS;

WITH ADDITIONS FROM

MARTYN, SMITH, MILNE, WILDENOW, ACHARIUS, &c.

NEW-HAVEN:

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District of Connecticut, ss.

L. S.

BE IT REMEMBERED; That on the thirteenth day of January, in the forty-first year of the independence of the United States of America, Hezekiah Howe, 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 Botanical Dictionary, being a translation from the "French of Louis-Claude Richard, Professor of Botany at "the Medical School in Paris; with additions from Martyn, "Smith, Milne, Wildenow, Acharius, &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."

H. W. EDWARDS,
Clerk of the District of Connecticut.

A true copy of Record, examined and Sealed by me,
H. W. EDWARDS,
Clerk of the District of Connecticut.

TO

ELI IVES, M. D.

PROFESSOR OF BOTANY AND MATERIA MEDICA IN

YALE COLLEGE.

Although this Dictionary has not received the benfit of any corrections immediately from your hand: I have been governed by your opinions in all cases of doubt.

Your liberal explanations in answer to my numerous enquiries, together with free access to your extensive library, have left me almost without excuse for my errors.

I beg permission to place the work under your protection; with the hope that my strenuous exertions to execute it in an acceptable manner will be received as an apology for its defects.

I am, with gratitude and esteem,
Your obedient humble servant,
THE AUTHOR.

NEW-HAVEN, Sept. 16, 1816.

6. All these materials thus combined, were then copied for the press; with occasional remarks, from the hints of able botanists.

Notwithstanding the diminutive size of the book, the author almost ventures to hope, that all the terms used by botanical writers in Latin or English, who follow the Linnean System, will be found here, satisfactorily defined and illustrated.

SYSTEMATIC TERMINOLOGY.

The principal elementary terms, together with the Classes and Orders, should be fixed in the memory, previous to entering upon the exercises of a practical botanist. The student must therefore be directed to look out and commit to memory the definitions of the following terms, according to this arrangement. All other terms may be looked out occasionally. See Botanical Exercises.

CAR'POGENATION

Comprises the Flower and Fruit.

The seven Elementary organs are:

1. CALYX. The outer or lower part of the flower, generally not coloured.
2. COROL. The coloured blossom of the flower, within or above the calyx.
3. STAMENS. The mealy or glutinous knobs, generally on the ends of filamentous organs.
4. PISTIL. The central organ of a flower, whose base becomes the pericarp and seed.
5. PERICARP. The covering of the seed; whether pod, shell, bag, or a pulpy substance.
6. SEED. The essential part, containing the rudiment of a new plant.
7. RECEPTACLE. The base which sustains the other six parts, being at the end of the stem.

NOTE. Any accidental appendage is called a nectary. The forms and positions of these organs, and of no other part, are employed in distinguishing the Classes, Orders and Genera.

SUBDIVISIONS OF THE CALYX.

Every calyx is either Monophyllous, consisting of one leaf; or Polyphyllous, consisting of more than one leaf. Calyxes are:

1. Perianth.
2. Involucre.
3. Spathe.
4. Glume.
5. Ament.
6. Calyptre.
7. Volva.

SUBDIVISIONS OF THE COROL.

Monopetalous, or one-petalled corols are:

1. Bell-form.
2. Funnel-form.
3. Salver-form.
4. Wheel-form.
5. Labiate.

Polypetalous, or more than one-petalled, corols, are:

1. Cruciform.
2. Caryophylleous.
3. Liliaceous.
4. Rosaceous.
5. Papilionaceous.

If the corol agrees with the descriptions of none of the above, it is *Anomalous.*

SUBDIVISONS OF THE STAMEN.

1. Anther.
2. Pollen.
3. Filament.

SUBDIVISIONS OF THE PISTIL.

1. Stigma.
2. Germ.
3. Style.

SUBDIVISIONS OF THE PERICARP.

1. Silique.
2. Legume.
3. Capsule.
4. Drupe.
5. Pome.
6. Berry.
7. Strobile.

SUBDIVISIONS OF THE SEED.

1. Corcle.
2. Cotyledons.
3. Tegument.
4. Hilum.

SUBDIVISIONS OF THE RECEPTACLE.

1. Proper.
2. Common.
3. Rachis.
4. Columella.
5. Spadix.

GENERAL DIVISIONS OF FLOWERS.

1. Simple.
2. Aggregate.
3. Compound.

INFLORESCENCE,
Or the manner in which flowers are situated upon plants.

1. Whorl.
2. Raceme.
3. Panicle.
4. Thyrse.
5. Spike.
6. Umbel.
7. Cyme.
8. Corymb.
9. Fascicle.
10. Head.

ROOTS AND HERBAGE.
The substance of roots and herbage consists of

1. Cuticle.
2. Cellular integument.
3. Bark.
4. Camb.
5. Wood.
6. Pith.

ROOTS are the descending parts of vegetables; and are *Annual*, *Biennial*, or *Perennial*. They are of seven kinds.

1. Branching.
2. Fibrous.
3. Creeping.
4. Spindle.
5. Tuberous, whether *knobbed*, *oval*, or *fascicled*.
6. Bulbous, whether *solid*, *coated*, or *scaly*.
7. Granulated, whether *moniliform*, or *dentate*.

HERBAGE is all the plant, except the *root* and *carpogenation*. It includes the *Stem*, *Leaves*, and *Appendages*.

STEMS are:

1. Tidge.
2. Culm.
3. Scape.
4. Peduncle.
5. Petiole.
6. Frond.
7. Stipe.

LEAVES are Evergreen or deciduous.

Simple leaves are:

1. Orbicular.
2. Ovate.
3. Oval.
4. Oblong.
5. Obovate.
6. Cordate.
7. Obcordate.
8. Kidney-form.
9. Lanceolate.
10. Linear.
11. Awl-form.
12. Awl-pointed.
13. Arrow-form.
14. Halbert-form.
15. Guitar-form.
16. Lobed.

17. Palmate.
18. Pedate.
19. Sinuate.
20. Pinnatifid.
21. Lyrate.
22. Runcinate.
23. Serrate.
24. Toothed.
25. Crenate.
26. Emarginate.
27. Retuse.
28. Obtuse.
29. Acute.

Compound leaves are:

1. Ternate.
2. Bi-ternate.
3. Tri-ternate.
4. Pinnate.
5. Bi-pinnate.
6. Tri-pinnate.
7. Interruptedly pinnate.

Surface of leaves are:

1. Hairy.
2. Downy.
3. Silky.
4. Bristly.
5. Ciliate.
6. Nerved.
7. Veined.

Positions of leaves are:

1. Decurrent.
2. Clasping.
3. Sheathed.
4. Perfoliate.
5. Connate.
6. Peltate.
7. Opposite.
8. Whorled.
9. Imbricate.
10. Fascicled.
11. Radical.

APPENDAGES.

1. Stipule.
2. Bract.
3. Thorn.
4. Prickle.
5. Sting.
6. Gland.
7. Tendril.

PHYSIOLOGICAL terms, general remarks and directions, to be read in the following order

Seed, cotyledon, vitellus, albumen, tegument, hilum, corcle, plumula, rostel. *Root*, bulb, scion. *Stem*, cuticle, cellular integument, bark, camb, wood, pith, sap, vessels, tracheæ, shoot, tree, shrub, dextrorsum, sinistrorsum. *Leaf*, bud, gemmation, leafing season. *Appendages*, thorn, prickle, sting, galls. *Fructification*, flower, sexus, pollen, perfect, imperfect, fovilla, fertilization, chorion, caprification, hybrid, efflorescentia, monstrous, florist, full-flowered, ergot or spurred rye. ELEMENTARY HEADS; natural history, partes primariæ, gentes, plant, phytology, system, vegetable, vegetable kingdom, vegetable substance, herbage. DURABILITY; ephemerus, annual, biennial, perennial, caducous, deciduous, permanent, evergreen. QUALITIES; medicinal, qualities of plants, natural orders, sapor, poisons, poisonous vegetables. DIRECTIONS; botanical exercises, botanical garden, herbarium. TERMS; relative proportions, synonyms, terminations, compound terms. MISCELLANEOUS; analysis, analogy, habit, ages, irritability, sleep of plants, temperature, light, varieties, indiginous, anomalous, phanerogamous.

NUMERALS.

The Latin and Greek numerals are so frequently compounded with other words by botanical writers, that an English student ought to commit them to memory, as here laid down. *Eis*, *Duo*, &c. are not used.

LATIN.	NOS.	GREEK.
Unus	1	Monos
Bis	2	Dis
Tres	3	Treis
Quatuor	4	Tettares
Quinque	5	Pente
Sex	6	Ex (pronounced hex)
Septem	7	Epta (pronounced hep-[ta)
Octo	8	Octo
Novem	9	Ennea
Decem	10	Deka
Undecem	11	Endeka
Duodecem	12	Dodeka
Terdecem	13	Dekatreis
Quartuordecem	14	Dekatettares
Quindecem	15	Dekapenta
Sexdecem	16	Dekaex
Septendecem	17	Dekaepta
Octodecem	18	Decaocto
Novendecem	19	Decaennea
Viginti	20	Eikosi
Multus	Many	Polus

LINNEAN SYSTEM OF VEGETABLES.

All Vegetables are divided into twenty-two* CLASSES. These CLASSES are divided into ORDERS. ORDERS are divided into GENERA. GENERA are divided into SPECIES. SPECIES are frequently changed into *varieties*. Varieties, however, are more properly within the province of the Gardener, than of the Botanist; at least the method of procuring varieties.

When a Botanist finds a plant, which he never saw before, and wishes to know its name and uses; he proceeds as follows.

1. He takes the unknown flower in his hand (no unknown plant can be ascertained without the flower) and compares its parts with the description of each class, until he finds the class to which it belongs.

2. He then goes to the orders of that class and finds its order in the same way.

3. Next he goes to the genera of that order, and reads their descriptions, until he finds the genus to which it belongs.

4. At last looks over the species of that genus, until he finds the exact description of his plant.

5. Thus he finds the Apple to be CLASS 12, ORDER 5, GENUS Pyrus, SPECIES Malus.

* Linnæus divided them into 24 classes. But farther discoveries, since his death, have proved the classes Polyadelphia and Polygamia to be too uncertain and variable to be any longer retained. Persoon, therefore, and other eminent botanists have rejected them. See these classes in the Dictionary.

LINNEAN CLASSES.

1. Monandria, one stamen or one sessile anther in the flower.
2. Diandria, 2 stamens, or 2 sessile anthers.
3. Triandria, 3 stamens, or 3 sessile anthers.
4. Tetrandria, 4 stamens, or 4 sessile anthers.
5. Pentandria, 5 stamens, or 5 sessile anthers.
6. Hexandria, 6 stamens, or 6 sessile anthers.
7. Heptandria, 7 stamens, or 7 sessile anthers.
8. Octandria, 8 stamens, or 8 sessile anthers.
9. Enneandria, 9 stamens, or 9 sessile anthers.
10. Decandria, 10 stamens, or 10 sessile anthers.
11. Dodecandria, 12 to 19 stamens, or sessile anthers.
12. Icosandria, about 20, or more, standing on the calyx.
13. Polyandria, always 20 or more, on the receptacle.
14. Didynamia, 4 stamens, 2 of them uniformly the longest.
15. Tetradynamia, 6 stamens, 4 of them uniformly the longest.
16. Monadelphia, stamens united by their filaments in one set, anthers remaining separate.
17. Diadelphia, stamens united by their filaments in two sets (sometimes in one set) flowers papilionaceous.
18. Syngenesia, stamens 5, united by their anthers in one set, flowers compound.
10. Gynandria, stamens stand on the germ, style, or stigma, separate from the base of the calyx and corol.
20. Monœcia, stamens and pistils in separate flowers, on the same plant.
21. Diœcia, stamens and pistils on separate plants.
22. Cryptogamia, stamens and pistile so obscure that the plants can only be classed by natural families.

A

BOTANICAL DICTIONARY.

Latin names are printed in *Italics*. But when the Latin and English differ only in a terminal letter or two, the Latin is omitted.

A

ABBREVIATED perianth. Shorter in proportion to its breadth, than is generally observed in other plants.

ABBREVIATIONS. Although each botanist may employ such abbreviations as best suit his purpose, by explaining their import; yet the following are in such general use, that it is convenient to know them:

Rad. root.	Fr. fruit.
Fol. leaf.	Ph. leafet of calyx.
Stip. stipule.	Per. pericarp.
Flo. flower.	Mas. stamate flower.
Cal. calyx.	Fem. pistilate flower.
Cor. corol.	Neu. neutral flower.
Pet. Petal.	Her. perfect flower.
Stam. stamen.	☉ annual.
Fil. filament.	♄ biennial.
Anth. anther.	♃ perennial.
Pist. pistil.	♄ woody.
Stig. stigma.	

Words which are numerical are expressed by figures: as quadrifid, 4-cleft; quinquafid, 5-cleft; quinquangular, 5-angled, &c.

Two Latin words are often contracted into one, as *incurvus* for *introrsum curvus*.

Abbreviatus. See abbreviated.

Abortiens. Se abortive.

Abortive flower. Not arriving to perfection; the proof of which is want of perfect seed.

—— *seed.* Not increasing or becoming perfect for want of the reception of pollen by way of the stigma.

—— *pistil.* Being defective in its external form.

—— *stamens.* Not being furnished with anthers; or with those which have no opening cells, or which are mere sketches or rudiments of anthers.

Abrupt leaf. A pinnate leaf, which has not an odd, or terminal leafet; or root as if bitten off; as Bird-foot violet.

Abrupte. Abruptly. See abrupt.

Acalycinus. Without a calyx.

Acaulis. See stemless.

Acerose leaf. Needle-form. Generally inserted on the sides of branches, as in the pines.

Acerosus. See acerose.

Acicularis. Form of a small needle.

Acinaciform leaf. Sabre-form. One edge sharp and convex, the other thicker and strait or concave. Cutlass-form.

Acinaciformis. See acinaciform.

Acine. One of the little globules, constituting a compound berry; as the rasp-berry.

Acinus. See acine.

Acotyledonous plants. Having no cotyledons, or seed-lobes: and consequently no seminal leaves. See Cotyledon and Seed-leaves.

Aculeatus. See prickly.

Aculeus. See prickle.

Acuminate. When the leaf, calyx, &c. terminate suddenly in a point, which is more or less curved towards one edge of the leaf.

Accuminatus. Awl-pointed. See accuminate.

Acutangularis. Sharp-cornered.

Acute. Any part of a plant terminating without a curved, or rounded termination. An obtuse angle or any other angle in mathematics, is acute in botanical language.

Acute. Acutely. As acute-dentatus, sharply toothed.

Acutiusculus. Acutish. That is; the apex, corner, &c. is hardly rounded so as to be called obtuse, and is rather too nearly round to be denominated acute. The termination *ish* as a diminutive is now sufficiently authorised by President Smith, and others.

Adnate. Adhering. Any two or more parts of a plant being attached to each other, in cases where analagous parts are separate in other plants. As the bulbous offsets of Daffodill. The stipule in some cases is detached from the petiole, in others it is adnate, &c.

Adnatus. Growing together. See adnate.

Adpressus. See appressed.

Adscendens. See ascending.

Adverse leaf. Presenting its upper surface to the sun.

Æqualis Polygamia. The 1st order of the class *Syngenesia.* The florets of the disk and of the ray are all perfect. Examples; Leontodon, (dandelion) Lactuca (lettuce) Hieracium (hawk-weed) Arctium (Burdock) Eupatorium (boneset).

Æquivalvis. Valves of a capsule equal among themselves. It is also applied to valves (chaffs) of a glume calyx.

Æruginosus. Light bluish green, verdigris colour.

Æstivatio. Summer residence. See Æstivation.

Æstivation. The manner in which petals lie in the flower-bud, before it opens. 1. *Convolute*, petals rolled all one way like a roll of paper or cloth. 2. *Imbricate*, petals lying over each other so as to break joints, like shingles on a roof. 3. *Conduplicate*, each petal having its edges rolled in, till the two opposite rolls meet on the midrib. 4. *Valvate*, when, just before they open, they stand like the husks of an ear of corn. 5. *Unequal-valved*, when the petals differ in size.

Affinis. Having relation, or affinity, to something supposed to be previously known.

Agamia. (*a* without *gamia* matrimony) Necker's name for the class *cryptogamia.*

Ages of plants. Some plants spring up, flower, ripen seed, and die in a few hours or a day, which are called *ephemeral.* Others live a few months, or a summer, which are called *annual.* Others spring up in one summer and ripen and die the next, which are called *biennial.* Others live an indefinite period, either with the whole stem and branches, or only by the root, which are called *perennial.*

The ages of trees may be known by counting the concentric rings, or grains. Our author, Richard, supposes that trees have three ages. 1. The age of increase, or growth. 2. The age of maturity, when there is no increase. 3. The age of decay. But is there not sufficient proof, that all trees, while in a living state, continue to deposit new layers of wood every year? If so, the age of maturity must be rejected.

Aggregate. Many springing from the same point or from the same receptacle. Sometimes this term is rather loosely applied to heaps or bundles.

Aggregate flowers are those where several stand on the same receptacle without united anthers. These flowers have rarely any inclination to yellow colour like compound flowers; but are blue, purple or white. See Smith, page 308.

Aigrette, Egret. The flying, feathery or hairy crown of seeds; as the down of thistles and dandelions. It includes whatever remains on the top of the seed, after the corol is removed.

—— *stiped* (stipulatus) when it is supported on a foot-stem.

—— *simple* (simplex) when it consists of a bundle of simple hairs, without branches.

—— *plumose* (plumosus) when each hair has other little hairs arranged along its sides, like the beards on a feather.

—— *membranous*, thin transparent leaves.

Martyn recommends this term under the word *pappus;* Barton adopts it, and Ives approves. On these authorities it is introduced here from the French botanists.

Aigretted. Bearing aigrette.

Ala. See wing.

Alatus. See winged.

Albicans. Whitish, growing white.

Albumen. The farinaceous, fleshy, or horny substance, which constitutes the chief bulk of monocotyledonous seeds; as wheat, rye, &c. Smith says they are more properly seeds without any cotyledons.

Alburnum. See Aubier.

Algæ. The fourth order of the class *cryptogamia;* containing those sea-weeds and aquatics of fresh waters, which are apparently mere pellicles or membranes; or branching leaves with blubbers along their substance; or mere formless fibres in

appearance. The definition of this order is: *The fruit is vesiculous or filamentous, in an aquatic or gelatinous frond.*

Linneus comprised the plants of the orders Hepaticæ and Lichenes under this order.

ALIENATED. When the first organs, as the stamens, leaves, &c. give place to others different from the natural habit of the plant.

ALTERNATE. Branches, leaves, flowers, &c. are alternate, when arranged upon opposite sides of the stem, or whatever supports them; beginning at different distances from its base, and continuing in nearly equal series. Sometimes they are in 3 series.

ALTERNATING. When one organ is arranged alternately respecting another; as the stamens, in the first ten classes, mostly alternate with the petals, or divisions of petals.

Alterne pinnata. Alternately pinnate.

ALVEOLATE receptacle. Having cells so as to resemble a honey-comb, with more or less of each seed imbedded in it.

Alveolatus. See alveolate.

AMENT. An assemblage of small flower-bearing scales, which serve as lateral calyxes. These are arranged along a kind of rachis, and each encloses either the stamens or pistils of flowers, if not abortive. The pine, willow, oak, chesnut, walnut and nettles are good examples.

Amentaceus. Growing in aments, amentaceous.

Amentum. See ament.

Amplexicaulis. See clasping.

Amplius. Enlarged, abundant.

Ampullus. See utricullus.

ANALOGY. In botany it is frequently necessary to reason from analogy. That is; after becoming

acquainted with those organs which usually accompany each other: if we discover one of them we frequently assume the existence of others in making out an object, when the parts are too minute for inspection. This principle becomes indispensable in most cryptogamous plants.

ANALYSIS. To analyse a plant *botanically*, is to search out the number, form, position, &c. of its organs, as they exist in a natural state. But to analyse *chemically*, the parts must be decomposed, combined with tests, &c.

Anceps. See ancipital.

ANCIPITAL. Having two opposite edges or angles; two-edged.

ANDROGYNOUS plants. Bearing staminate and pistillate flowers on the same root without any perfect ones; as the Indian corn.

—— *spike*, has both staminate and pistillate flowers, distinct on different parts of it.

—— *flower*, has stamens or pistils only, and is on the same plant with other flowers with different organs from itself.

Androgynus. See androgynous.

ANFRACTUOUS. Winding inwards by angular turnings.

Angiocarpus. Fungi bearing seeds internally.

Angiospermia. The second order of the class *didynamia.* The seeds are inclosed in a capsule (*aggos* capsule, *sperma* seed.) Antirrhinum (snap-dragon.) Scrophularia (fig-wort.) Pedicularis (louse-wort) are examples.

ANGULAR. By means of intervening grooves, stems, calyxes, capsules, &c. often have ridges running lengthwise, which give them this appellation. Sometimes the angles project considerably; particularly the side-points or projections of leaves, which are also called angles.

Angulatus. See angular.

Angustifolius. Narrow leaved.

ANNOTINE. Of one year.

ANNUAL. Which spring up, perfect fruit, and dies, in the same year. The herbage is often annual with a perennial root. But the root is always intended, unless the other parts be particularly mentioned.

Annulatus. Having a ring around the capsules in ferns; or a fungus with a ringed stype. See ring.

Annulus. See ring.

Annuus. See annual.

ANOMALOUS. (*a* without, *nomos* law.) Whatever forms an exception to the assumed rules or systems. In the attemps of old botanists at natural arrangement, many plants were necessarily thrown into anomalous classes.

ANTHER. The essential part of the stamen; being a delicate capsule containing a powdery or glutinous substance, called pollen.

The forms of anthers are frequently used in generic and specific descriptions. For these see the several forms of leaves, &c. under the respective terms.

Anthifera. Flowers bearing sessile anthers; that is, anthers without filaments.

Anthodium. See perianth calyx.

Apertio. See blooming.

APETALOUS. A flower without a corol. See staminous.

APEX. The tip or end.

APHYLLOUS. Leafless.

Apiculatum. Covered with fleshy, erect, short points.

Apophysis. A process from the base of the theca of mosses.

Apothecium. The receptacle of lichens, being the part whereon the seeds are formed and ripened. The saucer-form cups on those greenish leathery scabs on fences and stones, are examples. See Border of Lichens.

APPENDICULATE. Appendaged, having something attached to a leaf, corol, &c. as a wing on a petiole, a nectary at the end of a petal; as in some Polygalies.

APPENDAGES. See fulcrum.

APPRESSED. Closely pressed; as leaves against the stem, &c.

APPROXIMATE. Growing near each other, or near to a different part.

AQUATIC. Growing most naturally in or near water.

Arachnoideus. Covered with interwoven hairs, so as to resemble a spider's web.

Aráneosus. See arachnoideus.

Arbor. See tree.

ARBOREOUS. Tree-like; not bushy or shrubby.

ARBORESCENT. Becoming woody in approaching maturity.

Arbuscula. See suffrutex.

Arbustivus. Bush-like.

ARCHED. Curving above. See vaulted.

Arcuatim. Archwise.

Arcuatus. Bent like a bow. See bowed.

Arenarius. Growing in sand.

Areolatus. Raised a little so as to resemble a garden-bed.

Argenteus. Silver-coloured.

Argutus. See sharp.

Argyrocomus. Silky and silvery white.

Aridus. Dry and rough.

ARIL. The outer coat of a seed, which, not contracting with it in ripening, falls of. Scopoli calls it

Theca, but this name is now exclusively appropriated to the capsule of mosses.

Arista and *Aristatus*. See awn and awaned.

ARMS. The spines and prickles of plants.

Aromaticus. Aromatic, sweet scented.

ARROW-FORM. Shaped like an arrow-head. It differs from heart-form in having the side-lobes acute.

Articulus. See joint.

ARTICULATED. Jointed; which see.

Articulate. Jointedly.

ARTIFICIAL ARRANGEMENT. The bringing together of many plants under one head; by the number, figure, situation, connection and proportion of assumed parts, without any regard to their natural affinities. Such is the Linnean artificial system. It is absolutely essential in finding out unknown plants. Then his Natural orders and those of Jussieu, bring us back to the natural affinities. See Natural Orders.

Arundinaceus. Resembling reeds.

Arvensis. Growing in cultivated fields.

ASCENDING. Rising gradually between a horizontal and vertical position.

Ascidium. Bottle-form leaf or appendage; as on the *Sarracenia*.

Asper. See rugged.

Asperifolius. Rough-leaved.

Assurgens. Rising in a curve from a declined base.

ASTIPED. Pappus or a fungus without a stem, or stipe.

Atropurpureus. Dark Purple.

Attenuatus. Tapering gradually till it becomes slender.

AUBIER. Sap-wood, the last year's deposit.

Auctus calyx. Having an outer row of leafets; as the Dandelion.

Avenium. Veinless.
Aurantiacus. Orange-coloured.
Aureus. Gold-coloured.
Auriculatus, or *auritus.* See eared.
Autumnalis. Coming to maturity in autumn.
Autumnatio. The effect of autumn upon plants.
Awl-form. Linear at, and adjoining, the base; and becoming sharp and more or less curved to one-side at the point.
Awl-pointed. See acuminate.
Awn. A short slender process, or stiff beard, proceeding from the top or back of glumes, or chaff. Processes resembling awns are called by this name, which proceed from anthers or any other parts of vegetables.
Awned. Having awns.
Awnless. Without awns; sometimes it means a blunt pointless awn.
Axe-form. Nearly cylindric towards the base, with one side projecting towards the end; which projection is sharp-edged.
Axil. The arm-pit. Applied to vegetables it means the angle formed by the meeting of a leaf or petiole with the stem, or of a branch with the main stem.
Axillary. Any thing growing from the axils.
Azureus. See Cœruleus.

B

Bacca. See berry.
Bacciferous. Berry-bearing.
Bacillum. Pedicel of lichens.
Badius. Liver-brown.

BANNER. The upper petal in a papilionaceous flower.

BARB. A strait process armed with teeth pointing backwards.

Barba. See beard.

Barbatus. See bearded.

BARK. Properly the inner strong fibrous part of the covering of vegetables. But in a more extended sense it includes also the *cuticle* and *cellular integument;* which see. Also see cortex.

BARREN. Producing no ripe seed. See *staminate, neutral* and *abortive.*

Basis. Base. The part of a stem, leaf, flower, &c. nearest to the place through which it derives its nutriment.

BEAKED. Terminated by a process, formed like a bird's bill.

BEARD. Parallel hairs. It is applied to the filamentous nectaries on the petals of Iris. The lower lips of ringent corols are sometimes called beard.

BEARDLESS. Destitute of beard.

BELL-FORM. Swelling out at the base and without a tube. Properly applied to monopetalous corols only; but is frequently extended to liliaceous flowers, and some others.

BELLYING. See ventricose.

BERRY. A pulpy pericarp enclosing seeds without covering them with capsules, or themselves ever splitting into valves. As currant, grape, cucumbers, gourd, orange. Raspberries are compound berries; being made up of an assemblage of smaller berries or globules, called *acines.*

Bibulus. Sucking water.

BICAPSULAR. Two capsules to one flower.

Bicornis. Anthers with two horns, or two horn-form processes.

Bicuspidate. Having two lengthened points, each terminated with a small bristle.

Bidens. Having two teeth.

Biennial. Springing up one summer, flowering and dying the next, as wheat.

Bifareous. Facing two ways, presenting two opposite series.

Biferous. Bearing twice in a year. Common in hot climates.

Bifid. Two cleft, split into two divisions.

Bifidus. Bifid.

Biflorus. See two-flowered.

Biforus. Having two openings, or holes.

Bifurcatus or Bifurcus. Forked.

Bigeminate. Twin-forked. Having a forked stem with two leaves on each part.

Bijugous. A pinnate leaf with two pairs of leaves on each part.

Bilabiate. Corol with two lips; as in most of the class *didynamia.*

Bilamellate. Composed of two lamellæ; it applies to a flattened stigma split lengthwise.

Bilobate. Divided into two lobes.

Bilocular. Two-celled.

Binate. Two standing up together on the top of one stalk. If they spread out horizontally, they are called *conjugate.*

Binervius. Two-nerved.

Bipartible, or Bipartile. Naturally divisible into two parts.

Bipartitus. Divided into two parts to the base, but still remaining in one piece; as the petals of *stellaria.*

Bipinnate. Doubly pinnate. The general petiole with a second range, bearing pinnate leafets arranged each side of them.

BIPINNATIFID. Doubly pinnatifid. When the divisions of a pinnatifid leaf are cut in, or pinnatifid again.

BITERNATE. Doubly-ternate. When the petiole is ternate, and each division of it has three leafets.

BIVALVE. When a capsule is composed of two pieces, or valves; or when the glume calyx of grass, &c. consists of two chaffs, or husks.

Bivascularis. With two horn-form or cup-form cells.

BLISTERED. See bullate.

BLOOMING. The precise time when all parts of the flower are completely developed.

BLOSSOM. The corol.

BLUNT. Round-obtuse.

BOAT-FORM. Hollowed one side with a compressed longitudinal ridge on the opposite side.

BOLE. The naked trunk of a tree.

BORDER in LICHENS. The edging of their receptacles (apothecium.) It is *proper*, when of the same substance and colour of the receptacle. It is *accessory*, when of a different substance or colour from the disk of the receptacle.

BORDER of corols, leaves, fungusses, &c. The spreading brim.

—— *tenuis.* Thin border of a fungus.

—— *colorata.* Coloured border.

—— *equalis.* When the stem of a fungus is in the center.

—— *crassa.* Thick border, &c.

BOSSED. Bunched up in the center; as in some *agarics.*

BOTANY. (*Botane*, an herb.) The science which, by the aid of systematic arrangement, enables us; 1st, to find out the name of any plant before unknown to us; 2d, to ascertain its *general* medi-

cal and economical uses. Whether the physiology of vegetation is strictly a part of the science of botany or of Natural Philosophy, we will leave to school-men to decide.

Though MATERIA MEDICA comes not under this head, no one can study it with satisfaction to himself without a knowledge of botany.

BOTANICAL EXERCISES. Learners should be exercised in the application of botanical terms, after having committed to memory the elementary names and definitions, or the grammar of botany. This should be done by question and answer as follows:

Let each pupil have a specimen of some common simple flower. The teacher must point to each part of it and ask its name; to which the pupil must answer from these definitions. After the application of the names of the various parts of fructification is understood, all the other parts of plants must be attended to in the same manner. In a few weeks, the pupils may enter upon that practical part of the science, which leads to the discovery of the names of plants. Exercises in that part should be repeated in the following manner, with every plant, which pupils can procure.

Common apple flower.

Teacher. To what class does it belong?

Pupil. Icosandria.

T. Why?

P. It has 20 or more stamens fixed on the calyx.

T. To what order does it belong?

P. Pentagynia.

T. Why?

P. It has 5 styles.

T. To what genus does it belong?

P. Pyrus.

T. Why?

P. It has a 5-cleft superior calyx; corol 5-petalled; pome 5-celled; each cell about 2-seeded.

T. What species is it?

P. Malus.

T. Why?

P. The flowers are in sessile umbels; leaves ovate, serrate.

T. What are its qualities?

P. It belongs to the Natural order Pomaceæ, which contains mostly *refrigerants*. See Nat. Ord.

It will be perceived, that a suitable system of Vegetables, describing the plants of the country where pupils are taught, is essential.

Though the lecturer's chair is a more dignified place than such a schoolmaster-like employment; yet the pupils will derive more benefit from a season spent in this way, and in collecting and preserving plants, than from half a dozen courses of formal lectures. See herbarium.

BOTANICAL GARDEN. A few rods of ground enclosed, comprising the border of an old garden or rubbish ground, will produce many species of wild native plants. If to this be added all the wild roots which shew a little herbage in April, as well as the wild shrubs in the neighbouring woods; a very amusing and instructive wild botanic garden in miniature may be had, containing two or three hundred species of plants, at a very cheap rate.

BOTANICAL NAMES of plants. They should always have a Latin termination, in order to be equally convenient for all nations.

Botrus. A cluster, like grapes.

BOUGH. See branch.

Bowed. Curved over downwards.

Bowl-form. About half of a hollow sphere.

Brachiate. Branches nearly horizontal and *decussate*.

Bract, *Bractea*. Floral leaf. A leaf near or among flowers, which differs in shape, or colour, or both, from the other leaves of the plant; as on the bass-wood *(tilia.)*

Bracteatus. Bracted, having bracts.

Bracteiformis. Resembling bracts.

Branch. A division of the main stem, or main root.

Branched. Divided into branches. Applied to roots of trees.

Branch-leaves. Leaves growing on branches.

Branchlet. Subdivision of a branch; a twig.

Branch-peduncle. A peduncle proceeding from a branch.

Brevis. Short.

Brevissimus. Very short.

Bristles. Very stiff hairs. They are simple or hooked.

Bristle-form. Nearly proportioned to a bristle in length and breadth.

Bristly. Set with bristles.

Brumalis. See Hyemalis.

Bud. The winter residence of leaves and flowers. Generally wanting in hot countries. They are defended by imbricate scales and mostly by a clammy glutinous substance also. They are:

1. *Leaf-bearing*. Which are more slender and sharp.

2. *Flower-bearing*. Which are thicker, not so hard nor so sharp.

3. *Leaf and Flower-bearing*. Which are generally smaller than either of the other kinds. See foliation.

Bulb. *Bulbus.* Bulbous roots. Though we call the turnip, the onion, &c. roots, they are strictly buds; or the winter residence of the future plants. Some bulbs are borne above ground, as on several species of onion *(allium.)*

Bulbiferus. Producing bulbs above ground.

Bulbosus. Bulbous. Growing from bulbs.

Bulbous root. Fleshy and spherical.

Bulbulus. Small latteral bulbs shooting from larger ones.

Bullate. Raised in bunches or blisters; as when the pyrenchamous substance of a leaf rises up between the veins.

Bundle. See fascicle.

Butterfly-form. See papilionaceous.

Buttons, *Tricæ.* That kind of receptacle of lichens which when magnified resembles a coiled horse-hair. They are roundish, sessile, unexpanding, compact, black and solid; continued along their whole surface. Upper side they are in concentric, or coiled, plaited and twisted folds; covered every where with the same membrane; containing seeds without cells, or cases. Smith.

C

Caducous. Any part of a plant is caducous, which falls off earlier, compared with other parts of the same plant, than is usual for similar parts in most plants. As the calyx of the *poppy* falls off before the corol is hardly expanded.

Cæruleo-purpureus. Blue-purple, violet colour.

Cærulius. Blue.

Cæsius. Sky-blue, pale-blue.

CÆSPITOSE. Turfy. Several plants growing together, or from the same root, forming a turf.

Calamus. Reed-like.

Calcar. A conic spur. See spur.

CALCARATE. See spurred.

Caliculatus. Having a smaller outer calyx. See auctus.

CALYCINE. Appertaining to a calyx.

Calycinus or *Calicinus*. See Calycine.

CALYCLE. The outer calyx-like part of the crown of some seeds. Also see auctus.

Calycled. See auctus.

Calyculus. See calycle.

Calyptra. Calyptre, or veil. The cap or hood of pistillate mosses; resembling in form and position an extinguisher set on a candle. It is ranked among calyxes, and so used in descriptions. But in reality it is the corol closed; which after being detached at the base like other corols, its form still keeps it on the capsule a while. See villose, also *Perichœteum*, which is the true calyx of mosses.

Calyptratus. Having a calyptre.

CALYX. (*Kalux*, that in which something is enclosed.) That floral organ, which proceeds from the receptacle or peduncle below all the other organs. It is generally green; or, in botanical language, not coloured. When the calyx or corol is wanting, it is often difficult to determine which is present. Our author, Richard, says: when but one is present, it ought always to be called the calyx. But as no one can change the language of botanists, which is already adopted in descriptions of plants, we must endeavour to understand it as it is.

If the stamens alternate with the leafets or divisions, Linnæus calls it a corol; and if the stamens stand opposite to the leafets or divisions, he calls it

a calyx, without regarding the colour or texture. Where the stamens are numerous, this rule cannot apply; neither has Linneus made it necessary in his descriptions.

Wildenow's rule. The Calyx is hardly as long as the stamen; the corol quite as long or longer; the calyx green and firm; the corol coloured and tender. This rule is to apply where but one of the organs is present; and he allows a few exceptions to this.

—— *double.* When one calyx is outside of another; as in the *holly-hock* (althea.)

—— *common.* When one calyx includes many florets, as the thistle.

—— *proper.* When florets, included in a general calyx, have calyxes of their own.

There are seven kinds of calyx: 1. Perianth. 2. Involucre. 3. Spathe. 4. Glume. 5. Ament. 6. Calyptre. 7. Volva. See each.

Camb, *Cambium.* Du Hamel's name for the mucilaginous or gelatinous substance between the wood and bark.

At the time in the year when the camb is most abundant, many farmers in North America have peeled off all the bark from the body of bark bound apple trees; it is soon replaced, especially if carefully wound up in swingling-tow, &c. But the slightest scratch upon the camb will cause a large opening in the new bark, and leave a large spot of dry dead wood. The same is always observed in the operation of inoculating trees.

Every one, who is accustomed to observe American forest trees, has frequently seen trees which are killed by the frequent fires in the woods, whose whole bole is totally dead, leaving a mere thin sheet alive next to the bark, on the side oppo-

site the course of the fire; and still these trees continue to grow, flourish and bear fruit as usual. Then if all outside of the camb may be taken off, and all inside destroyed, and the tree still survive, it is evident that *it is by means of the camb that the tree is supported.* More especially as the least removal of camb is always succeeded by dead wood; all other parts remaining undisturbed.

CAMPANULATE, *Campanulatus.* See bell-form.

Campestris. Growing in uncultivated fields.

Canaliculatus. See channelled.

Cancellatus. See latticed.

Capillaceus. See capillary.

CAPILLARY, *Capillaris, Capillaceus.* Hair-form; longer than bristle-form in proportion to its thickness.

Capillus. Hair. See pilus.

CAPITATE, *capitatus.* Head-form; growing in heads.

Capitulum. See head.

Capreolus. See tendril.

CAPRIFICATION. The fertilizing of pistillate flowers by sprinkling pollen upon them. This is important in raising figs.

CAPSULE, *capsula,* (a little chest.) That kind of pericarp, which opens by valves and becomes dry when ripe; not including siliques nor legumes. When it is one-valved, it is called a FOLLICLE, *folliculus,* which see. It consists of *valves, partitions, columella,* and *cells,* which see. One kind of capsule never opens and is called *samara.*

Carina. See keel.

CARINATED. See keeled.

Carinatus. See keeled.

Carneus. Flesh-coloured.

Carnosus. Fleshy.

CAR'POGENATION. (*Karpos,* fruit; *genesthai,* to bring forth.) A substitute for the word *fructification.* A

multiplication of terms is very injurious to the science. But in teaching botany to young persons, a word, so often to be repeated and so very difficult to pronounce, is extremely troublesome. This term is both easy and perfectly applicable. In a synopsis presented to Professor Mitchill of New-York, this substitute was proposed and received his approbation.

CARTILAGINOUS. Hard and somewhat flexible. It applies to a leaf, when it is bound around with a strong margin, different from the disk of the leaf.

CARYOPHYLLEOUS. A pink-like corol; having five petals with long claws, all regular and set in a tubular calyx.

Castrata. Filaments without anthers.

Catenula. A thread in some mosses, serving to unite or chain together the seeds.

CATKIN, *Catulus.* See ament.

Cauda. See tail.

Caudex. The main body of a tree or root.

CAULESCENT, *caulescens.* Having a *caulis*, or stem, besides the peduncle or scape.

CAULINE, *caulinus.* Growing on the main stem.

Caulis. The main herbage-bearing stem of all plants, except of the grassy kind; as trees, weeds, &c. We have no English name for this stem; neither can any English termination assimilate this term with our idiom. It has been usual in such cases to look into some modern language for a suitable term. How would the French word *Tige* be received? (Pronounced *tidge* in English.)

CELL. The hollow part, or cavity of a pericarp or anther. It is more generally applied to the cavities of pericarps, where seeds are lodged. According to numbers of these the pericarps are called *one-celled, two-celled,* &c.

Cellular integument. The pyrenchamous substance between the cuticle and bark. This substance is generally green. It constitutes the most considerable part of leaves; in which the juices are operated upon by air and light, and the peculiar secretions of vegetables principally elaborated.

Cellules, *cistulæ*. That kind of receptacle of lichens, which is globose, terminal, and formed of the substance of the frond. It is filled with uncoated seeds, intermixed with fibres; at length it bursts irregularly. Smith.

Cellulosus. Cellular. Having cavities within, which are small and irregular; and in which sometimes granules are nested.

Centralis. In the center.

Cephalodia. See knobs.

Cerealis. (*Ceres*, goddess of corn.) Any grain of which bread is made.

Cernuus. When the apex or top only droops or bends down. See *nutans*, and the difference in the two terms.

Cespitose. See Cæspitose.

Chaff. Thin membranous covering of the seeds of grass, grain, &c. See glume. It is also applied to whatever resembles chaff; as the substance left on the receptacles of some compound flowers, after the seeds are removed; to the crown of some seeds, &c.

Chaffy. Bearing chaff.

Channelled. Hollowed out longitudinally with a rounded groove of considerable depth.

Character. That description of a plant, which distinguishes it from all others. In making out the character, Situation, Proportion, Connection,

Number and Figure, are considered. The two last are not so constant as the other three.

Generic characters are limited to the flower and fruit.

Specific characters are restricted no farther, than to avoid running into the characters of the genus.

CHORION. A clear limpid liquor contained in a seed in the time of flowering. This liquor, after the pollen is received, becomes a perfect embryo of a new plant, and takes the consistence usual in perfect seeds. But without the reception of the pollen, neither any thing like the embryo or perfect seed, is ever formed. Malpighi.

Chrysocomus. Golden locks; or a yellow bundle of threads.

CICATRICE, *Cicatrisatus.* The mark or natural scar from whence the leaf has fallen.

CILIATE, *ciliatus.* Edged with parallel hairs or bristles, resembling eye-lashes.

CINEREOUS. Of the colour of wood-ashes.

Cingens. Surrounding, girding around.

CIRCINAL. Rolled in spirally beginning with the tip, which continually occupies the center; as ferns.

Circinatus. Circinal. Also compassed about.

Circumcissus. Cut round. Opening transversely, not lengthwise; as the capsules of purslain.

Circumscriptio. The circumference of a leaf.

Cirriferus. Bearing tendrils.

CIRROSE, *cirrosus.* Terminating in a tendril.

Cirrus. (Curled bushy hair.) See tendril. This term is also applied to that kind of *clouds* which resembles flax, as it is pulled from the distaff. This kind of clouds ascend 4 or 5 miles high; much higher than any other kind.

Cistulæ. See Cellules.

CLAMMY, See viscid.

CLASPER. See tendril.

CLASPING. The base of the leaf being more or less heart-form and sessile, so that the two hind lobes partly surround the stem.

CLASS, *classis*. The highest division of plants in a system. Each class is defined to be the agreement of several genera in the parts of fructification, according to the principles of nature, distinguished by art. Linnæus divided all plants by their stamens and pistils, into 24 classes; but Persoon and other approved systematic writers have distributed the plants of the 18th and 23d classes among the others, and rejected these two; leaving but 22 classes. These are rejected on account of the liability of their characters to perpetual variations. See each class in its proper place, also system.

CLAVATE, *clavatus*. Club-form. Growing larger towards the end.

Clavicula. See tendril.

Clausus. Closed, shut up.

Clavus. See spurred rye.

CLAW. The lower narrow part of a petal by which it is fixed on the calyx or receptacle. It can exist only in Polypetalous corols.

CLEFT. Split down, not exceeding half-way to the base; with nearly strait edges on both sides of the fissure. The parts into which it is split are numbered in descriptions; as once split making two divisions, is called 2-cleft; two splits, 3-cleft, &c.

CLEFTS, *lirellæ*. That kind of receptacle of *lichens*, which is open, elongated, sessile, black, very narrow or linear, with a somewhat spongy disk; the border is parallel on each side and proper. Sometimes it has an accessory border from the crust be-

sides. The *clefts* are either simple and solitary; or aggregate, confluent and branched. Smith.

CLIMBING. Ascending by means of tendrils, as grapes; by leaf-stalks, as virgin's bower; by cauline radicles, or rootlets, as the creeping American ivy (rhus radicans.) It differs from *twining*, which see.

CLOUDS. See Natural History.

CLOVEN. See cleft.

CLUB-FORM. See clavate.

CLUSTERED. See racemed.

Clypeatus. Form of a buckler. See peltate.

COADUNATE. With united bases.

COARCTATE. Compact. Pressed or squeezed close together.

COATED. Consisting of concentric coats, layers or skins, as the bulbous root of onions.

COBWEBBED. See arachnoideus.

Coccineus. Scarlet-coloured.

Coccum. A grain or seed. Tricoccous, 3-seeded; pentacoccous, 5-seeded, &c.

COCHLEATE, *cochleatus.* Coiled spirally, like a snail-shell.

Coherens. Cohering, attached.

COILED. Twisted like a rope; or rather resembling the form of one thread of a rope, after the other threads are removed.

Collinus. Growing on hills.

COLOURED. Of any hue except green; but in the language of botanists green parts are not coloured. See temperature, also glaucous.

Coloratus. Coloured.

COLUMELLA. That which connects the seeds to the inside of a pericarp. It is generally applied to a central pillar in a capsule; which takes its rise from the receptacle, and has seeds attached to it on all sides. In mosses it is called *sporangi-*

dium by Wildenow; and he sometimes applies this term as a substitute for *columella*; and says it is found only in 2-valved capsules.

COLUMNAR. See terete.

Columnifera. Stamens and pistils disposed in the form of a column.

Coma. (*Kome*, a head of hair.) A tuft of bracts on the top of a spike of flowers.

COMMON. Any part is common, which serves to include or sustain several parts, similar among themselves.

—— *perianth.* Including several florets; as in the thistle.

—— *involucre.* Surrounding the base of the pedunculs in an umbel, which are subdivided above.

This term is often used for *frequent* also.

Communis. See common.

COMOSE. Having a coma.

COMPACT. See coarctus.

COMPLETE, *completus.* Having both calyx and corol. When the corol is wanting, the flower is *incomplete*. When the calyx is wanting, the flower is *naked*, if it has a corol.

COMPLICATE, *complicatus.* Folded together.

Compositus. Compound.

COMPOUND. One whole, formed of many similar parts.

—— *flowers.* Those comprised in the class *syngenesia*, with several florets on one receptacle, each with united anthers.

Compound flowers are divided into five kinds by the relations and kinds of florets; upon which divisions are founded the five orders of the *syngenesia* class.

1. The florets are all perfect, each having 5 stamens and one pistil. The anthers are all uni-

ted into one set forming a tube around the pistil. See æqualis.

2. The florets of the disk are all perfect; but those of the ray, or the edging-florets, are pistillate. See superflua.

3. The florets of the disk all perfect; but the florets of the ray neutral, having neither stamens nor pistils; except in some cases they have abortive pistils. See frustranea.

4. The florets of the disk staminate; but those of the ray pistillate. See necessaria.

5. The florets all perfect as those of the 1st kind; but differ from them in each floret having a little perianth of its own, which is wanting in all the four preceding kinds. See segregata. This last kind is not so common as the others.

—— *leaf.* When several leafets grow on one petiole.

—— *raceme.* When several racemes grow along the side of a peduncle.

—— *spike.* When several spikelets grow along the side of a fruit-stalk, or general spike.

—— *umbel.* Having the peduncles subdivided into peduncles of lesser umbels, &c.

—— *petiole.* A divided leaf-stalk.

—— *peduncle.* A divided flower-stalk.

Compound terms. When any part of a plant is to be described, which does not agree with the definition of any term in use; two or more terms must be compounded, so as to convey to the mind correct information. For example the chesnut leaf has notches on the margin pointing towards the apex, which answers to the description of serrate leaves; excepting that the notches are hollowed out. But these hollowed notches are not deep enough for sinuses; therefore the two terms

are compounded, making *sinuate-serrate*. Compound terms are always united by a hyphen.

COMPRESSED, *compressus*. Flattened, as if squeezed or pressed.

CONCAVE, *concavus*. Hollowed a little on one side. It is sometimes applied to deeper hollows; though rarely.

Conceptaculum. See follicle.

Concolor. The same colour in all the parts.

CONDENSED. See coarctate.

CONDUPLICATE. That kind of foliation where the leaf, while in the bud, has its two sides shut together like two leaves in a book.

CONE, *conus*. See strobile.

CONFERT, *confertus*. Thick-set; leaves, flowers, &c. standing so closely together, as to seem to crowd each other.

CONFLUENT. Running together. It is applied more particularly to the receptacle of some lichens, which run together in disorder and become indistinct.

CONGENERES. Plants of very similar habits, &c.

Congestus. See heaped.

CONGLOMERATE. See glomerate.

CONIC. With a broad base and approaching a point towards the top.

Conifera. Bearing cones.

CONJUGATE. See binate.

CONNATE. Leaves which are opposite, with their bases growing together, so as to form the appearance of a single leaf. Anthers are sometimes connate also.

Connivens. See converging.

Consimilis. Resembling.

Contiguus. Near, next.

CONTORTED, *contortus*. Twisted. It is is also applied to corols, which have the edge of one petal lying obliquely over the next.

Contractus. Close, narrow.

Contrarium. See partition.

CONVERGING. Approaching, or bending towards each other.

CONVEX. Swelling out in a roundish form.

Convexus. Convex.

CONVOLUTE, *convolutus*. Rolled into a cylindric form, like a roll of paper, lengthwise with the midrib. Applied to the situation of leaves in the bud.

CORCLE, *corculum*. (*Cor*, the heart.) The embryo of the new plant in a seed, situated between the cotyledons in dicotyledonous seeds. It consists of the *plume* and *rostel*, which show themselves soon after vegetation commences. See plume and rostel.

CORDATE. Heart-form; so called from its supposed resemblance to the heart. It is hollowed behind with the side-lobes rounded at the base. See arrow-form.

Cordate-oblong, *cordate*-lanceolate, &c. pertake of the formation of both compounds.

CORIACEOUS. Leathery or parchment-like.

CORNERED. Having angles or corners. Three-cornered, four-cornered, &c. is often expressed trigonus, &c.

Cornu. A horn or spur.

Cornutus. Horn-form.

COROL, *corolla*. (A diminutive of *corona*, a crown.) The inner delicate covering of the flower, which constitutes its principal ornament in most cases. In a few cases, as the *bartsia coccinea*, the corol is dull and unsightly, while the calyx is gaily coloured. See petal and nectary.

COROLLET, *corollula.* A little corol.

Corolliferus. Bearing the corol.

Corollinus. Resembling, or appertaining to, a corol.

Corona. See crown.

Coronarius. Forming a crown.

Coronatus. Crowned; as the thistle seed is crowned with down.

Coronula. A little crown.

CORTEX. The bark, which see. It consists of a number of layers equal to the number of years the tree has been growing; though they are often too thin to be numbered. The inmost layer is called the *liber.*

Cortical. Having its origin from the bark.

Corydalis. (*Koros*, a helmet.) Plants with helmet-form corols.

CORYMB, *corymbus.* Flowers umbel-like in their general external appearance, but their peduncles or supporting stems stand at different distances down the main stem; as yarrow.

Corymbifera. Bearing corymbs.

COSTATE, *costatum.* Ribbed.

Cottony. See tomentose.

COTYLEDON. The thick fleshy lobes of seeds. Very manifest in beans at the first commencement of germination. These lobes soon become thick succulent leaves, after they rise out of the ground.

Jussieu's Natural Orders are founded principally upon the cotyledon. He makes three great tribes, or divisions, of plants. 1. ACOTYLEDONES, plants without cotyledons; as *mushrooms, mosses, ferns,* &c. 2. MONOCOTYLEDONES, plants with one cotyledon; as *wheat, grass, Indian corn, cat-tails, sweet-flag, sedge, Solomon's seal, onion, iris, ladies' slipper, pond-lily,* &c. 3. DICOTYLEDONES, plants with two cotyledons; as *beans, peas, dock, plan-*

tain, lilac, sage, tobacco, milkweed, dandelion, See Natural Orders.

COWLED. When the edges meet below and expand above, and generally separate; as the spathe of the *arum,* Indian turnip.

Crassus. Thick.

CREEPING. Running along the ground, or along old logs, &c. nearly in a horizontal direction, and sending off rootlets.

CRENATE. Scolloped, on the rim or edge. Notches on the margin of a leaf, which do not point or incline towards either the apex or base. When large crenatures have smaller ones on them, they are doubly-crenate.

CRENULATE. Very finely crenated.

CRESCENT-FORM. Resembling the form of the moon from its change to half-fulled.

CRESTED. Having an appendage somewhat resembling a cock's comb in form.

Creta. Growing on chalky land.

Grinitus. Long-haired.

Crispus. See curled.

Cristatus. See crested.

CROSS-ARMED. See brachiate.

CROWDED. See confert.

CROWN. The calycle, hair, or feathers on the top of some seeds; as the dandelion.

CROWNED. See coronatus.

Cruciatim. Crosswise. Opposite pairs of branches or leaves successively crossing each other. See decussate.

CRUCIFORM. (*Crux,* a cross.) Corols with four petals, whose lamina form a cross. Plants with such corols belong to the class *tetradynamia.*

CRUSTACEOUS. Leafy appearance, but consisting of small crusty substances lying one upon another.

CRYPTOGAMIA. (*Kruptos*, concealed; *gamos*, marriage.) The name of the last class in the Linnean Artificial system. It includes those plants, whose stamens and pistils are too minute or obscure to be used as classic characters. This class is therefore distinguished by natural affinities; and cannot be said to be artificial, though arranged with the other classes in the artificial system. It includes the natural families of 1. *Filices*, ferns; as brakes, polypods, maidenhair, ground-pine, scouring-rush, &c. 2. *Musci*, mosses; as water-moss, earth-moss, fork-moss, great or hair-cap moss, &c. 3. *Hepaticæ*, liverworts—less common, except a few species. 4. *Algæ*, seaweeds, &c. as the common weed about docks with blubbery swellings, and the green thread-form substance in brooks, which is not much like a vegetable substance in appearance. 5. *Lichens;* as the light green patches on fences and stones, the whitish spots on stones with black spangles appearing like fly-dirt, the long fibrous substance common on trees, which is erroneously called tree-moss, &c. 6. *Fungi;* as the common mushroom and toadstool, puff ball, touchwood, mould, blight or rust on grain, smut, &c. All these are organized substances bearing seeds, and are highly interesting subjects for the microscope.

CRYPTOGAMOUS. Belonging to the class cryptogamia. See phanerogamous.

CUBIT. A measure from the elbow to the end of the middle finger.

CUCULATE. See cowled.

CUCURBITACEOUS. Resembling gourds or melons.

CULINARY. Suitable for kitchen cookery.

CULM, *Culmus*. The stem of grain and grass, when dry it is usually called straw. It is applied to all grassy plants; as Indian corn, sedge, sugar cane, &c.

Culmiferous. Having culms.

Culmineous. Having an affinity to grasses, or culmiferous plants.

Cumulus. Heaped. This term is also applied to that kind of *clouds*, which have a strait base and roundish heaped upper side. See Vellus.

Cuneiforme. See wedge-form.

Cup-form. Hollow within, resembling a little cup.

Cupularis. Cup-form.

Curled. When the periphery of a leaf is too large for the disk, it becomes waved or curled.

Curved. Bent inwards. See incurved.

Cuspidate. Having a sharpened point and that tipped with a bristle, a prickle, or lengthened apex, not curved. See mucrinate and observe the distinction; also accuminate.

Cuticle. The thin outside coat of the bark, which has no life and is very durable, often transparent. It greatly resembles the scarf-skin of animals. Very distinct on elder, currant and birch; on one species of birch it resembles paper.

Cyaneus. Blue.

Cyathiformis. Wineglass-form. Cylindric, widening gradually upwards, margin not revolute.

Cylindric. A circular shaft, of nearly equal diameter throughout its whole extent.

Cymbiformis. See boat-form.

Cyme, *cyma.* Flowers umbel-like in their general external appearance. It agrees with an umbel in having its common stalks spring from one center; but differs in having those stalks variously and alternately subdivided; as the elder (*sambucus.*) Smith.

Cymosus, cymose. Being in cymes.

Cyphellæ. See pits.

D

Dædalius. The end broad, waving and torn.

DAGGER-POINTED. See cuspidate.

Debilis. Weak, feeble, lax.

DECAGYNIA. (*Deka.* ten; *gune,* female.) Ten-styled. The name of the tenth order in each of the first thirteen classes. Let the class be whichever of these it may, if the pistil consists of ten styles or sessile stigmas, it is of the 10th order. In North America there is not a native plant in this order, excepting *poke-weed* (phytolacca:) and in England there is none.

DECANDRIA. (*Deka,* ten; *andra,* male.) Ten-stamened. The name of the tenth class. It comprises all plants, whose flowers are perfect, with ten stamens in each, which are not united by their filaments in one or two sets.

It is also the name of the *tenth order* in those classes, where the character of the first 13 classes are taken for orders; as the *geranium* in the class *monadelphia,* the *pea (pisum)* in the class *diadelphia,* &c.

Decaphyllus. Ten-leaved.

Decemfidus. Cut into ten parts, or 10-cleft.

Decemloculare. Ten-celled.

Deciduous. Falling off in the usual season for similar parts to fall; as leaves falling at the decline of the year; corols falling off at the time the stamens fall, &c. See caducous and permanent.

DECLINED, *declinatus.* Curved downwards archwise.

DECOMPOUND. *decompositus.* Doubly-compound. When a compound, or divided, petiole has a compound leaf on each part, the whole is a decompound leaf. The same with umbels, &c. See supra-decompositus.

Decorticabilis. Easily peeled.

DECUMBENT, *decumbens.* When the base is erect, and the remainder is procumbent. It applies to stems, stamens, &c.

DECURRENT. When the two edges of a leaf extend downwards below the points of insertion and become projecting wings to the stem. The gills of *agarics* are decurrent, when they run down the stipe in a single ridge.

Decursive. Decurrently.

DECURSIVELY PINNATE. When the leafets of a pinnate leaf run along the petiole with their extended bases.

DECUSSATED, *decussatus.* When leaves or branches are opposite in pairs, and each pair stands at right angels with the next pair above or below on the same stem.

DEFLECTED, *deflexus.* Bending down archwise.

Defloratus. Having discharged the pollen.

DEFOLIATION, *defoliatio.* The shedding of leaves in the proper season.

Defoliatio notha. The shedding of leaves before the proper time, on account of injuries received.

DEHISCENT, *dehiscentia.* The natural opening of capsules in the proper season.

Deliquum. See debilis.

DELTOID, *deltoideus.* A leaf with four corners; that is, one at the stem, one at the apex, and one each side; but the side ones are nearer to the base than to the apex. When the side angles are about as near to the apex as to the base, it is called a *rhomboid* leaf. Both kinds are called *diamond-form* in English. Wildenow considers a deltoid leaf as a thick 3-sided leaf, a transverse section of which he supposes intended, as giving the deltoid form. See page 155.

Demersus. See submersed.

DENSE, *densus.* Close, compact. A panicle with abundance of flowers very close is dense. See thyrse.

DENTATE, *dentatus.* Toothed.

—— *leaf.* (This term is of such almost unlimited extent, it is best defined negatively.) Projections from the margin of a leaf, which are of its own substance; and not serratures, nor crenatures.

—— *root.* That kind of granulated root, which resembles teeth strung together.

DENTICULATE. Having very small teeth.

DENUDATE. Plants whose flowers appear before the leaves, consequently have a naked appearance.

Deorsum. Downwards.

Depauperatus. Few-flowered.

Dependens. Hanging down.

DEPRESSED. When the upper surface of a succulent leaf is a little concave. It applies to seeds also.

Descendens. The entering of a root into the ground. The direction is *vertical*, as the beet; *horizontal*, as the mint; *oblique*, as the branching roots of most trees.

DESCRIPTIONS of plants. In writing a complete description of a plant, begin with the fructification, and describe: 1. Calyx. 2. Corol. 3. Stamens. 4. Pistil. 5. Pericarp. 6. Seed. 7. Receptacle. Then go through with the root and herbage, thus: 1. Root. 2. Stem and branches. 3. Buds including the foliation. 4. Leaves. 5. The appendages; that is, Stipules, Bracts, Thorns, Prickles, Stings, Glands, Tendrils. To this add the Inflorescence.

Then add the general appearance and size of the plant, and what well-known plant it most resembles. Give an account of the soil and situa-

tion where it grew; whether high or low, wet or dry—the precise time of flowering, colour of all parts, whether annual, biennial or perennial. Then close with the name of the town, country, &c. and what quantity of the same kind of plant is to be found there; and what name the common people call it by, if any. Accompany this description with several specimens; so selected as to exhibit the plant in all its parts.

There can be no better exercise for students, than to write several such descriptions every day. See Diagnosis.

Desiccatio. Dryness.

Dextrorsum. Twining from left to right; that is, with the apparent motion of the sun; as the hop-vine.

DIADELPHIA. (*Dis*, two; *adelphos*, a brother.) Two brotherhoods. The name of the seventeenth class. It comprises all plants, whose flowers are perfect, with the stamens united by their filaments in two sets. This was the character given the class by Linneus. But *Lupines* and others of this class have the stamens united in one set; which is the character of the Monadelphia class. The form of the corol has therefore been taken into the description by some writers, thus:

Stamens united by their filaments in one, or two sets, corols papilionaceous.

DIADELPHOUS. Belonging to, or varying into, the class diadelphia.

Diagnosis. A short description containing only what is essential. Linneus made it his rule, never to let a specific description exceed twelve Latin words. Wildenow says, more must be added if necessary. It should extend no farther than to

express the difference between that, and the other species.

DIAMOND-FORM. See Deltoid.

DIANDRIA. (*Dis*, two; *andra*, male.) Two stamened. The name of the second class. It comprises all plants, whose flowers are perfect, with two stamens in each, not growing on the pistil.

It is also the name of the *second order* in those clases where the characters of the first 13 classes are taken for orders; as the ladies' slipper (*cypripedium*) in the class *gynandria*, the duck-meat (lemna) in the class *monœcia*, willow (salix) in the class *diœcia*.

DICHOTOMOUS. Forked. Stem, &c. parted in pairs, each branch parted in pairs again, and so on. When it is parted but once it is more properly called forked, *furcatus*.

DICOCCOUS. Two-grained. Consisting of two cohering grains, or cells with one seed in each.

DICOTYLEDONOUS. Plants with two cotyledons. See Cotyledon.

DIDYMOUS, *didyma*. Twinned.

DIDYNAMIA. (*Dis*, two; *dunamis*, power.) Two overtopping or overpowering others. The name of the fourteenth class. It comprises all plants, whose flowers are perfect, with 4 stamens, two of which are regularly longer than, or overtopping, the other two. Plants of this class have labiate corols. But on account of adhering rigidly to the character of the class, some ringents are placed in the 2d class. The student should be directed to look in the second class, under the sections of irregular corols, when he has a ringent flower, whose generic character he does not readily find in the 14th class.

DIDYNAMOUS. Belonging to, or varying into the class didynamia.

Difformis. Applied to a monopetalous corol whose tube widens above gradually, and is divided into irregular or unequal parts—Wildenow. It is also applied to any distorted parts of a plant.

DIFFUSED, *diffusus.* Spreading. Expanded in an open loose manner.

DIGITATE. Fingered. When the base of several leafets rest on the end of one petiole; as the strawberry and fivefinger.

DIGYNIA. (*Dis*, two; *gune*, female.) Two-styled. the name of the second order in each of the first thirteen classes. It comprises all plants in each class respectively, whose flowers have two styles in each: or, if the styles are wanting, two sessile stigmas: as the blite (blitum) in the class *monandria;* the sweet-scented grass (anthoxanthum) in the class *diandria;* wheat (triticum) in the class *triandria;* witch-hazel (hamamelis) in the class *tetrandria;* rice (oryza) in class *hexandria;* pink (dianthus) in the class *decandria;* agrimony (agrimonia) in the class *dodecandria.*

Dilatatus. Expanded, widened.

Dilute. Prefixed to a colour implies, that it is reduced; as dilute purpureus, pale purple

Dimidiatus. See halved.

DIŒCIA. (*Dis*, two; *oikos*, house.) The name of the 22d class, or the 21st if the 18th be rejected. It includes those plants whose flowers are not perfect; but the stamens and pistils grow on different plants of the same species. The Hemp, Hop, Willow, and Poplar, are good examples.

DIŒCIOUS, *dioica.* Belonging to, or varying into, the class *diœcia.*

DIPETALOUS. Having 2 petals.

DIPHYLLOUS. Having 2 leaves.

DISCOID. Having a disk without rays. Such compound flowers as are wholly made up of tubular florets; that is, though they may have marginal florets differing from those in the disk in the essential organs, yet the corols will be all tubular, and not capitate.

DISK, *discus*. The whole surface of a leaf, or of the top of a compound flower, as opposed to its edge or periphery. This term is also applied to the aggregate florets of an umbel.

Dispermus. Containing but two seeds.

Dissectus. Gashed in deeply.

Dissipimentum. See partition.

Dissiliens. A pericarp is dissilient, when it bursts open with a spring; as the touch-me-not, (impatiens.)

Distans. Standing off remotely.

Distichus. (*Dis* two *stichos* row.) Two-ranked. When branches, leaves or flowers are arranged along opposite sides of the stem or spike, so as to point two opposite ways; as the leaves of the hemlock tree (pinus canadensis.)

DISTINCT, *distinctus*. Separate, opposed to connate or confluent.

DIVARICATE, *divaricatus*. Branches spreading out from the stem so far, as to form more than a right angle with it above.

DIVERGING, *Divergens*. Branches spreading out from the stem so far, as to form a right angle with it.

Diurnus. Enduring but a day.

DIVIDED, *divisus*. Severed into parts.

DODECANDRIA. (*Dodeka*, twelve; *andra*, male.) Twelve stamined. The name of the eleventh class. It comprises all plants, whose flowers are perfect, with from 12 to 19 stamens which are not

united by their filaments in one or two sets. Endecandria would seem to be the proper name for the 11th class. But there has not only never been a plant found, whose flowers uniformly contained 11 stamens; but it is so contrary to all analogy of parts, it is presumed there is no such plant.

DODECANDROUS. Belonging to, or varying into, the class *dodecandria.*

Dodecaphyllus. Having twelve leafets.

Dodrans. Long span. Distance between the ends of the thumb and little finger, both being extended.

Dolabriforme. See axe-form.

DORSAL, *dorsalis.* Fixed to the back. Awns are dorsal, when proceeding from the outside of a glume and not from the tip.

DORSIFEROUS. Bearing the fruit on the back; as ferns.

DOTTED. Besprinkled with dots. See punctate and perforated.

DOUBLE. Two in the place where most plants have but one; as the double calyx of the holly-hock (althea.)

DOUBLE-FLOWERED. See full-flowered.

DOUBLY. See duplicate. In English it has its common appropriate meaning; as doubly-crenate, when the crenatures are crenated, &c.

DOUBLY-PINNATE. See bipinnate.

DOWN or DOWNY. See tomentose.

DROOPING. See cernuus.

DRUPE, *drupa.* That kind of pericarp which consists of a thick, fleshy, succulent or cartilaginous coat, enclosing a nut or stone. It is *berry-like* (baccata) as in the cherry, or *dry* (exsucca) as in the walnut *(juglans.)*

DRUPACEOUS. Bearing drupes, or fruit resembling them.

Dubius. Doubtful.
Dulcis. Sweet.
Dumosus. Bushy, or resembling bushes.
Duodecemfidus. Cleft in 12 divisions.
Duplex. Double.
Duplicato. Doubly. This term is often prefixed to others, in all which cases it simply means doubly. As duplico-ternatum, doubly-ternate or biternate.
Duplicatus. Doubled.
DURATION. See ages.

E

EARED. This term applies: 1st, to the round extended, or appendaged lobes of a heart-form leaf: 2nd, to the side lobes near the base of some leaves: and 3rd, to twisted parts, in some ferns and some liverworts, which are supposed to resemble the conchus, or passage into the ear.
Ebracteatus. Without bracts.
Eburneus. Ivory white; as the whole plant *monotropa*, called beechdrops, or birdsnest.
Ecalcuratus. Without a spur.
ECHINATE, *echinatus.* Hedge-hog-like. Beset with erect prickles.
EFFLORESCENCE. The powdery substance on some Lichens, composed of minute deciduous globules.
Efflorescentia. Flowering season of different sorts of plants. More simple flowers come out in June than in any other month in North America. Very few compound flowers appear before August.
EFFOLIATION. Unnatural falling of leaves by means of improper culture, worms, &c.
EGG-FORM. } See ovate.
Eglandulosus. Glandless.

EGRET. See aigrette.

ELASTIC. See dissiliens.

ELLIPTIC. Longer than wide, rounded at or near both ends, and nearly equal in breadth towards both base and apex.

ELONGATED. Lengthened out, as if extended beyond what is usual in similar parts.

EMARGINATE. Notched in the end at the termination of the midrib. See Retuse.

EMBRACING. See clasping.

EMPALEMENT. See calyx.

END-BITTEN. See præmorsus.

ENERVATE. Nerveless.

ENNEANDRIA. (*Ennea*, nine; *andra*, male.) Nine-stamened. The name of the ninth class. It comprises all plants, whose flowers are perfect, with 9 stamens in each. The number of stamens are very variable in most plants in this class; particularly in the genus *laurus*, including the common sassafras and spice-bush.

It may also be the name of the *ninth order* in those classes where the characters of the first 13 classes are taken for orders; should any discoveries hereafter require it. Linneus' system is so contrived, that it not only provides for all known plants; but also assigns a place for all possible discoveries.

ENNEANDROUS. Belonging to, or varying into, the class *enneandria*.

Enneapetalus. Nine-petalled.

Enodis, ENODE. Knotless. Having no joints; as the bulrush.

ENSATE, *ensatus*. Having sword-form leaves.

ENSIFORM. Sword-form. Two-edged, tapering from base to apex mostly, and a little arching towards one edge; as flag and cat-tail (Iris and Typha.)

ENTIRE. Continued without interruption. A margin of a leaf, calyx, corol, &c. is entire, when it is neither serrate, toothed, notched nor in any manner indented.

Ephemerus. Of very short duration.

Epicarpeus. On the germ. See superior.

Epidermis. See cuticle.

Epiphragma. A thin membrane stretched over the mouth of the moss, *polytrichum.*

EQUAL. Similar parts equal among themselves. The calyx, corol, &c. are equal, when the leafets, petals or subdivisions, are similar in form, size and direction. Opposed to unequal.

EQUINOCTIAL FLOWERS. Opening at stated hours each day.

EQUITANT. Opposite leaves embracing each other, so that they alternately enclose each other's edges; as the leaves near the roots of the Iris and yellow garden lilies (hemerocallis); also the position of the leaves in some unopened buds.

ERECT, *erectus.* Upright. Not so perfectly straight and unbending as strictus. When applied to any thing latterally attached to the stem, as leaves, &c. it implies that it makes a very acute angle with it.

Erectiusculus. Erectish.

ERGOT. See spurred rye.

Erinaceus. Hedge-hog-like. See *echinatus.*

EROSE, *erosus.* Gnawed. Unequally sinuated, as if the sinuses had been eaten by insects.

ESCULENT. Eatable.

ESSENTIAL character. See diagnosis.

ESSENTIALS. The stamens and pistils.

EVERGREEN. Such plants as retain their leaves throughout the year; as white pine, laurel, &c.

EXANNULATE. Ferns whose capsules are without rings. This comprises one section of ferns. Those

which have an apparent vestige of, but not in reality, a ring, form another section. Those with a ring, another. See annulatus.

Exaratus. See sulcate.

Exasperatus. See roughened.

Excavatus. Hollowed out.

EXOTIC, *exoticus.* Plants not growing spontaneously in a wild state in that particular country, or section of a country.

EXPANDED, *expansus.* Spread.

Explanatus. Unfolded.

EXSERT, *exsertus.* Standing out. Stamens are exsert when protruded out of the corols. Peduncles of spikes in culminiferous plants are exsert, when protruded out of the sheaths; as carex folliculata and pubescens.

EXSTIPULATE. Without stipules.

Exsiccus. Juiceless.

Extimus. At the very top, or extreme end.

EXTRAFOLIACEOUS. Outside of the leaf A stipule is extrafoliaceous when it comes out a little lower than the leaf does.

Extrorsum. Outwardly.

EYE. See hilum.

F

Facies. The general external appearance of a plant.

FACTITIOUS character. An essential character, where the number of parts or some other circumstance, not of essential importance, are taken into it—Wildenow. Artificial marks distinguishing one genus from another—Martyn. What is not natural—Richard. It admits of fewer or more characteristic marks, than are absolutely necessary—Milne.

It serves to discriminate genera that happen to come together in the same artificial order or section. It can never stand alone, but may sometimes commodiously enough be added to more essential distinctions.—Smith.

FALCATE. See acinaciform.

FAMILIES. See gentes.

Faniculis umbiliatis. The small thread or pedicle by which seeds are fastened at the hilum, and by which they receive their nourishment, till ripe.

Farctus. Stuffed, full. It is opposed to fistulous, hollow.

Farina. See pollen.

Farinosus. Mealy, powdery.

Fasciatus. Having parallel bands, or coloured stripes.

FASCICLE, *fasciculus.* A bundle. Flowers level-topped, umbel-like in the general external appearance, with footstalks irregular in their origin and subdivision. The fascicle differs but little from the corymb, excepting in having shorter footstalks, which do not extend so far down the main stem. Sweet-william (dianthus) is a good example.

A bundle of tuberous roots is called a fascicle; as the asparagus roots. Also a bundle of leaves; as of the white pine.

FASCICULATE. An unnatural bundle of branchlets.

FASTIGIATE, *fastigiatus.* Level-topped. Applied to aggregate flowers, which are elevated to an equal height or nearly so; forming a level, convex or concave top, differing but little from a plane. It is also applied to leaves; as the hog-weed (ambrosia artemesiafolia.)

Favosus. See alveolate.

Faux. Jaws. The throat or opening into a corol. That precise spot, where the tubular part of a rin-

gent corol begins to separate or expand into lips or mouth, is the faux.

FEATHER. See Aigrette. The plumose crown of seeds.

FEMALE, *femineus*. See pistillate.

FENCE. Involucre of Withering.

FENCED. Walled around, as the stamens are by the scales in brookweed (samolus.)

Fere. Almost.

FERNS. See filices.

FERRUGINOUS, *ferrugineus*. The colour of iron-rust. See glaucous.

FERTILE. See pistillate.

FERTILIZATION. The application of the pollen, which is formed in the cells of anthers, to the stigma; which is essential to the production of perfect seed. See chorion. Richard is too lengthy upon this subject for the plan of this Dictionary; which is intended for definitions and illustrations, but not for physiological discussions.

Fetidus. Smelling disagreeably.

FIBRE, *fibra*. Any thread-form part. The small flexible thread-form roots of grasses and many other plants, are called fibres.

FIBROUS. Composed of fibres.

FIDDLE-FORM. See panduræformis.

Figura. See icones.

Figuratum. This term is applied to the mouth of the capsule of a moss, when it is set round with membranaceous teeth.

FILAMENT, *filamentum*. That part of the stamen which is between and connects together the anther and the receptacle, calyx or pistil. When the filament is wanting, the anther is sessile. In monopetalous corols, the filaments are generally inserted into, or are attached to, their bases.

Filices, FERNS. The first order of the class cryptogamia. It includes all that natural family of plants, whose fruit grows on the backs of leaves, on a peculiar appendage, or on a leaf (frond) wholly metamorphosed into a kind of fruit-bearing spike. See cryptogamia, annulatus, and exannulatus. Brake, polypod, and maidenhair belong to this order.

FILIFORM. Thread-like. Of nearly equal thickness throughout, round and cylindric. It is applied to spikes which are very long in proportion to their diameters. But it is generally confined to smaller parts.

Fimbriatus. Fringed. Differs from ciliate in being less regular and of coarser parts.

Fimetarius. Growing naturally on manure-heaps.

FINGERED. See digitate.

FISSURE. A cleft or slitted aperture.

Fissus. See cleft.

FISTULOUS. Hollow like a pipe, flute or reed.

FLACCID, *flaccidus*. Too lax or limber to support its own weight. See lax.

Flagellum. See runner.

Flagelliformis. Resembling a whip-lash.

Flammeus. Flame-coloured.

FLAT. See planus.

Flavus. Yellow.

FLESHY. Thick and filled with pulp within.

FLEXIBLE, *Flexilis*. Easily bent.

FLEXUOSE. Bending and frequently changing direction. A stem is flexuose, or zigzag, which uniformly bends at regular intervals; as from joint to joint, branch to branch, leaf to leaf, &c.

Flexus. Bent. This relates to but one bending. See geniculate.

FLOATING. See natant.

FLORAL. Relating to a flower.

—— *bud.* Containg an unopened flower.

—— *leaf.* See bract.

Florescentia. See efflorescentia.

Floret. Little flower. Whether the flower be large or small, it is a floret, if it is one of a number all of which constitute an aggregate or compound. As the litle flowers which make up the head of a thistle, a head of wheat, the umbel of a carrot, &c.

Floribundus. Abounding in flowers.

Floriferous. Bearing flowers. A leaf is floriferous when a flower grows out of its disk or margin.

Florist. One whose employment is that of creating monsters; that is, double and various coloured corols; as carnations, double roses, &c. These meet a more ready sale than the most interesting plants in their native state, among persons of a coarse unscientific taste. Such persons, to be consistent, should prefer the high coloured daubings of a sign painter, to the delicate touches of a Savage, a Trumbull, or a Vanderlin.

Flos. See flower.

Flosculär, *flosculosus.* See tubulous.

Flower. The stamens and pistils with their covering. These two organs, or rather their anthers and stigmas, are essential to all plants. But the calyx, corol, and even nectaries when present, are parts of the flower. The flower is perfect with a single stamen and pistil. But if either of these be wanting, it is imperfect, however splendid and gay the corol, &c. as it can never bring forth perfect seed nor in any manner produce its kind. Raising plants from bulbs, roots, &c. is now known to be only an extension of the same individual, which will cease to grow, when it arrives to its stated limits. For this reason grafts from a kind of tree long known and often transferred from tree to tree,

sooner die of old age, than those taken from a kind later from the seed. It is for this reason also, that any kind of potatoe, however excellent, ceases to produce good crops, after being for 20 or 30 years extended by planting the root. It must be renewed from the seed from time to time, or become extinct. Smith says, "all other modes "of propagation [excepting by the seed] are but "the extension of an individual, and sooner or "later terminate in its total extinction." See page 240.

FLOWERING SEASON. See efflorescentia.

FLOWER STALK. See peduncle.

Fluviatilis. Growing naturally in rivers and brooks.

FOLD. Annexed to numerals denoting so often combined; as 5-fold leaves, growing in fives, &c.

FOLIACEOUS. See leafy.

FOLIARIS *cirrus.* A tendril on a leaf.

—— *gemma.* A bud containing leaves only.

FOLIATION, *foliatio.* The manner in which unopened leaves are situated within the bud. The modes of foliation are: 1. Involute. 2. Revolute. 3. Obvolute. 4. Convolute. 5. Imbricate. 6. Equitant. 7. Conduplicate. 8. Plaited. 9. Reclinate. 10. Circinal. See each in its proper place.

Foliatus. Leafy.

Foliferus. Particularly adapted to bearing leaves.

FOLIOLE, *foliolum.* See leafet.

Foliosus. See leafy.

Folium. See leaf.

FOLLICLE, *Folliculus.* A pericarp with one valve, which opens lengthwise on one side only; as milkweed (asclepias.)

Fontinalis. Growing naturally about springs.

FOOTSTALK. See *peduncle* and *petiole*, it is put for both.

Foraminulosus. Pierced with many small holes.

FORKED. See dichotomous.

Fornicatus. Arched. See vaulted.

Fovea. A nectariferous cavity for the reception of honey.

Fovilla. The fine substance contained in the particles of pollen. When the ripe pollen comes in contact with the moist stigma, it explodes and discharges the fovilla.

Fragilis. Breaking easily and not bending.

Frequens. Very common, or frequent.

Frigidus. Growing naturally in cold countries.

FRINGED. See fimbriatus.

FROND. An herbaceous, a leathery, a crustaceous, or gelatinous leaf, or somewhat of a leaf-like substance, from which or within which the fruit is produced. It is applied exclusively to the class cryptogamia—Smith. But formerly it was also applied to *palms.*

Frondescentia. See leafing.

FRONDOSE. *Frondosus.* Leafy, or leaf-like. It is applied to *mosses* to distinguish them from *liverworts* by Wildenow; who retains them in the same order.

Frons. See frond.

Frutescentia. Applied to palms and such others as have a simple stem, and leaves only at top. Wildenow, page 268.

It is applied by Martyn to the time when vegetables scatter their ripe seeds.

FRUCTIFEROUS. Bearing, or becoming, fruit.

FRUCTIFICATION, *fructificatio.* "The temporary part "of vegetables, which is destined for the repro- "duction of the species, terminating the old indi- "vidual and beginning the new." Linneus. It consists of seven parts—1. Calyx. 2. Corol. 3.

Stamen. 4. Pistil. 5. Pericarp. 6. Seed. 7. Receptacle. See each in its proper place.

FRUIT, *fructus*. The seed with its enclosing pericarp. If the seed grows naked, the seed alone is the fruit; as of the sage.

FRUIT-DOTS. Assemblages of capsules on the backs of ferns. Also small assemblages of powdery bodies on the fronds of lichens, called *soredia*.

FRUIT-STALK. See peduncle.

FRUSTRANEA (*Frustra*, in vain) *polygamia*. The 2d order of the class *syngenesia* The florets of the disk are perfect, of the ray neutral. Examples. Helianthus (sunflower.) Centaurea (blue-bottle.)

FRUTESCENT, *frutescens*. Woody; or from herbaceous becoming woody.

Frutex. A shrub, which see.

Fruticosus. See shrubby.

Fugax. Fugacious. Soon disappearing. Flying off. See ring.

Fulcratus. Having appendages.

Fulcrum. These are seven—1. Stipule. 2. Bract. 3. Thorn. 4. Prickle. 5. Sting. 6. Gland. 7. Tendril. See each in its proper place.

FULL-FLOWERED. When the petals of the corol are so multiplied as to exclude the stamens; which is effected by the stamens becoming petals; as the peony, rose, &c. This rarely takes place in monopetalous corols. Double flowers are totally unfit subjects for botanical exercises. See florist.

Fulvus. Yellowish rust-colour.

FUNGI, funguses. The *sixth order* of the class *cryptogamia*. It comprises that natural family of plants which is totally destitute of all herbage or herbaceous substance, and of a spungy, pulpy,

leathery or woody texture. See Angiocarpus and gymnocarpus, also cryptogamia.

They are now known to be organized bodies, propagating their kind by seeds, like other vegetables. However unsightly a common toadstool, the mould on old scraps of leather in damp places, or the blight in grain, may appear to the careless observer; they are all beautifully organized, and highly interesting to the student in Natural History. But "their sequestered and obscure habita-"tion, their short duration, their mutability of "form and substance, render them indeed more "difficult of investigation than common plants." Smith, page 500.

Fungus. This term is sometimes put for pileus.

FUNNEL-FORM. A corol with a tubular base, and a border opening gradually into the form of a reversed cone.

Furcatus. See dichotomous.

FURROWED. See sulcate.

Fuscus. Sooty-yellow, dark-yellow.

FUSIFORM, *fusiformis.* Spindle-form. A root thick at the top and tapering downwards to the point is fusiform; as the beet and carrot.

G

Galea. See labiate.

Galeatus. Resembling a helmet.

GALLS, *gallæ.* Excrescence produced by the stings of insects. The balls found on oaks which are used in dyeing, the common large green oak-balls, the singular green lumps found on the wild honeysuckle, &c. are examples. The irritation upon the delicate sap-vessels, produced by the sting and egg

of the insect, causes a greater flow of sap in that direction. This pressure of sap distends and distorts the capillary tubes and membranes, until those excrescences are formed around the egg. In due time the egg becomes a larva, or maggot, which after feeding a while upon the gall, changes into the pupa, or crysalis, and at last escapes a perfect insect, or fly. Each fly produces a gall of a peculiar form. Wildenow.

GAPE. The opening between two lips of a labiate, or irregular, corol.

GAPING. See hians.

GASHED. See incisus.

Geminus. See double. It is also used for paired, in pairs or twins.

Gemma. See bud.

Gemmatis. Budding. The germation of plants comprehends the developement of a new plant from the bud, as well as the foliation; according to Richard. See foliation. Buds are of four kinds. 1. *Bud*, properly so called, which see. 2. *Turion*, the radical bud, or tender shoot which rises from the root in the spring, before it expands its leaves; as the early asparagus shoots. 3. *Bulb*, which see. 4. *Propago*, a longish round body proceeding from the mother plant in mosses, which itself becomes a new plant. This is placed among the buds by Richard: but Linneus calls it the seed; and Gærtner applies it to the seed of *lichens* also.

GEMMIPAROUS. Producing buds in the axils of leaves.

GENERAL. See partial.

GENERAL FENCE. Universal involucre.

GENERIC CHARACTER. The definition of a genus. It is confined entirely to the flower and fruit. It is *essential*, *factitious*, or *natural*; which see.

GENERIC NAME. The name of a genus. Milne enu-

merates 21 rules respecting the naming of *genera;* which with his examples, occupy 40 pages. The principal names are founded upon some supposed virtues of plants, expressed in Latin or Greek—the habit, place of growth, &c. expressed in the same manner—given in honour of some distinguished botanist—or borrowed from the fables of poets.

It seems to be an established modern rule, that no *genus* shall have the name of a politician, or of any other character however distinguished, unless liberal patronage, or skill in the science of Botany, will warrant it.

GENICULATE. Kneed. Forming a very obtuse angle, like a moderate bending of the knee.

Gentes. Nations. Linneus divided plants into nine great natural tribes or casts. 1. PALMS (palmæ); as the date and cocoa-nut. 2. GRASSES (gramina); as wheat, Indian-corn, sugar-cane, rice, timothy grass, &c. 3. LILIES (lilia); as lily, tulip, daffodil, &c. 4. HERBS (herbæ); as thistles, nettles, peas, mint, potatoes, hemp, plantain, beets, and all other herbaceous plants except the above. 5. TREES, (arbores); as oak, chesnut, pine, willow, dogwood, currants, lilac, whortleberry, cranberry, and all other plants with a woody stem. 5. FERNS (filices); as brake, polypod, maidenhair, ground pine, and all other plants of this order, which see. 7. MOSSES, (musci). See the order. 8. ALGÆ. This tribe includes the plants of the orders, *hepaticæ*, *algæ* and *lichenes*, which see. 9. FUNGI. As mushroom, toadstool, puff ball, mould, blight, &c.

GENUS. (plural *genera.*) A number of plants which agree with one another in the structure of the flower and fruit. Wildenow. The *classes* are divided into *orders*, and then the orders are divided into

genera, the genera into species. This is the *analytic* method. The species are united into their respective *genera* by rejecting the specific distinctions; genera are united into their respective *orders*, by rejecting the generic distinctions; orders are united under their respective *classes* by rejecting the taxinal character. This is the synthetic method. Thus it will be readily perceived, that scientific botany is practical logic.

Plants of the same genus possess similar medical powers, though in very different degrees. Milne. This rule is certainly liable to some exceptions.

GERM, *germen*. That part of the pistil, which, after the pollen is received, soon contains the rudiment of one young plant, or more. Its whole substance becomes the pericarp and seed, as it enlarges itself.

When the calyx comes out below the germ, the germ is *superior*, and the calyx *inferior*; when the calyx comes out of the upper part of the germ, the germ is *inferior*, and the calyx *superior*.

The *mirabilis* and *sanguisorba*, have the germ between the calyx and corol. But Smith says, the corol can be traced to the base of the germ in the *sanguisorba*; and Doct. Ives showed the writer of this article a *sanguisorba media* wherein he had distinctly separated the corol from the germ entirely to its base. It is therefore very doubtful, whether there is a plant, whose germ is between the calyx and corol.

GERMINATION. The swelling of a seed, and the unfolding of its embryo.

GIBBOUS. Bunched out. When one or both sides are swelled out.

GILLS. See lamella.

Gilvus. Iron-grey.

GLABROUS, *glaber*. Sleek. Having no pubescence. Glaber is often translated smooth, which in most cases conveys a correct idea; or at least does not lead to error. But a leaf with soft cottony pubescence is smooth, though it is not glabrous.

Gladiatus. A sword-form legume is sometimes called gladiate. See ensiform.

GLAND, *glandula*. A round, or roundish appendage which serves for transpiration and secretion. They are situated on leaves, stems, calyxes, and particularly at the base of stamens in some cruciform flowers; as mustard. Glandular hairs, or hairs with glandular heads, are very abundant on the common hazlenut calyx of North America (corylus americana.)

GLANDULAR, *glandulosus*. Having glands.

GLASS-FORM. See cyathiform.

GLASSY. See hyaline.

GLAUCOUS. Cloathed with a seagreen mealiness, which is easily rubbed off. It is sometimes put for a greenish-grey colour. This colour, *ferruginous* and *hoary*, are so constant, that they are used in specific descriptions. All other colours are excluded on account of their being too variable to be relied on.

GLOBOSE, *globosus*. Spherical, round on all sides like a ball. This term is often applied in cases where the part is rather roundish than perfectly globular.

GLOBULES. That kind of receptacle of lichens, which is globose, solid and crustaceous, formed of the substance of the frond, and terminating its points or branches; from whence they fall off entire, leaving a pit or cavity. They are supposed to be covered all over with a coloured seed-bearing membrane. Smith.

Globuli. Globules.

Glochis. See barb.

GLOME. A roundish head of flowers.

GLOMERATE, *glomeratus.* When many branchlets are terminated by little heads—Richard. A spike is glomerate when it consists of a collection of spherical heads—Wildenow.

GLOMERULE, *glomerulus.* The small heads constituting a glome, or a small glome.

GLUME, *gluma.* Consists of the scales or chaffs which surround or enclose the stamens and pistils in the flowers of grasses. The outer ones are called the calyx, the inner ones the corol.

Each scale, chaff, or husk, is called a valve; which gives the names *bivalve,* with 2 husks or chaffs; *univale,* with one, &c.

When several flowers are arranged along a rachis in a spikelet with a valve or two, or more, below the lowest flower, these are called the common or general calyx (gluma communis); and the glumes to each floret on the spikelet above is called partial (gluma partialis.)

Richard says, glumes ought to be called bracts; as they are not properly either calyx or corol.

GLUMOSE. Having glumes.

GLUTINOUS. Having on some part more or less of adhesive moisture.

GNAWED. See erose.

Gongulus. A knot. It is applied to a round, hard body, which falls off upon the death of the mother plant, and becomes a new one; as in the *fucus.* Wildenow.

GRAMINA. The family of grasses. See gentes. But in a limited sense, the sedges, rush grasses, &c. are not included. See Natural Orders. Culmiferous is the most extensive term; and most of this vast family have three stamens in each flower,

though many of them are monœcious. The rice, stargrass and rushgrass have six stamens to the flower.

Graminifolius. Having leaves resembling those of grasses.

Grandiflorus. Having large flowers.

Graniferus. Bearing grains or kernels; as those on the valves of dock-flowers.

GRANULATE, *graulatus.* In the form of grains. A granulate root consists of several little knobs strung together along the side of a filiform radicle. It differs from the knobbed tuberous roots in this; that the latter are strung together by rootlets which proceed from near the middle of one knob to another.

GRANULATIONS. Grain-like substances.

Graveolens. Having a strong odour or scent.

GROOVED. See sulcate.

GROSSIFICATION. The enlarging of the fruit after the florescence.

GUITAR-FORM. See panduræformis.

Gymnocarpi fungi. Such as bear seeds in a naked *hymenium*, which see.

Gymnospermus. (*Gumnos*, naked; *sperma*, seed.) With seeds naked, or growing without pericarps.

GYMNOSPERMIA. The name of the first order in the class *didynamia.* It includes those plants, whose seeds have no pericarps; as mint, motherwort, pennyroyal, hyssop, catmint, thyme, heal-all, &c. The rudiments of the four naked seeds may be seen around the base of the pistil, as soon as the flower opens.

GYNANDRIA. (*Gune*, female, *andra*, male.) Stamen and pistil united. The name of the 20th class, or of the 19th if the 18th be rejected. It includes all plants whose stamens are inserted on the germen,

style, or stigma, separate from the base of the corol. Formerly plants were placed here, as the *passion flower*, &c. whose stamens were attached to an elongated receptacle.

The pollen in most plants of this class is glutinous. Many of them have the anther on a moveable lid on the top of a style. Plants formerly in the second order of this class are mostly removed to the first by Swartz. What was formerly considered as two anthers is found to be 2 cells of one anther. The pollen is often in stalked masses, which might appear to a student like so many anthers.

H

Habitatio. The native residence of plants; or the situation wherein they grow most naturally.

HABIT, *habitus.* The external appearance of a plant by a general view of which we know it without attending to any of its essential characters.

A knowledge of the habits of plants is to be acquired; by first seeing them in a growing state, and then by repeatedly reviewing them in an HERBARIUM, which see.

HAIR. See pilus.

HAIR-LIKE. See capillary.

HAIRY. See pilose.

HALBERT-FORM. See hastate.

HALVED. One-sided, as if one half had been taken off; as the halved spathe of some Indian-turnips, one-sided involucres, &c.

Hamus. A hook, as the hooked spines on burdock.

Hamosus. Hooked.

Hamulosus. With very small hooks.

HAND-FORM. See palmate.

HANGING. See pendant.

HASTATE. Halbert-form, or shaped like an espontoon. A leaf with processes near the base from each edge, which are acutish; as common sorrel leaves. When these processes point considerably backwards the leaf is sagittate.

HATCHET-FORM. See axe-form.

HEAD. Flowers heaped together in a roundish form with no peduncles or very short ones; as clover-heads. This term is applied to a globular stigma also.

HEAPED. Compact but hardly so close as *dense*.

HEART. See corcle.

HEART-FORM. See cordate.

HEDGE-HOGGED. See erinaceus.

HELMET. See labiate.

HEMISPHERE. Half a sphere.

HEPATICÆ. See cryptogamia.

HEPTAGYNIA. Seven-styled. The name of the 7th order in each of the first 13 classes.

HEPTANDRIA. (*Epta*, seven; *andra*, male.) Seven-stamened. The name of the seventh class. It comprises all the plants whose flowers are perfect, with 7 stamens in each.

It may also become the name of the seventh order in those classes where the characters of the first 13 classes are taken for orders should future discoveries require it. See enneandria.

HEPTANDROUS. Belonging to, or varying into, the class heptandria.

HERB, *herba*. Any plant which has not a woody stem. But when applied to the 9 families (see gentes) it includes neither grasses nor lilies.

Herbaceous. Not woody. Also applied to plants which perish annually down to the root.

HERBAGE. All that part of a vegetable which is

bounded by the root below, and by the fructification above. It comprises all parts of every plant, except the root and fructification, whether herbaceous or woody. See partes.

HERBARIUM. A collection of dried plants. No person can ever become a good practical botanist without an herbarium. See habit. A man of science may acquire a knowledge of the physiology of plants, and obtain a general view of the science of botany from books. But to become a practical botanist, so far as to be able to apply the principles of the science to any useful porpose, an herbarium is essential.

The uses of an herbarium are principally these:

1. *To acquire a knowledge of plants.* Any person of either sex, who is desirous to know the names of all the plants in any neighbourhood (which, in the compass of three or four miles, will amount to 6 or 7 hundred species in most parts of North America, exclusive of cryptogamous plants) should make an herbarium according to the following directions. Let this be sent to the nearest practical botanist; who will readily annex to each its generic and specific name. Make an index to these names; and frequently look over the plants and compare others with them, in a growing state; which is all that is required to obtain the object desired.

2. *To revive in the memory the names and habits of plants.* No memory is sufficiently retentive to permit nothing to slip, relating to several hundred species of plants; unless they are frequently presented to the eye.

3. *When plants are not in flower, they often want some of their most striking habits also.* It is therefore very convenient and satisfactory to compare

the more minute parts in order to insure correctness in relation to plants, which we have occasion to examine at various seasons of the year.

Directions for making an herbarium.

Those, who are desirous to know all the various modes of performing this interesting task, are referred to Smith's Elements, page 504. Wildenow's Principles, p. 4. Richard under the word *herbier*. But the object of the author being to give an account of the most simple and convenient method; a detail of the various plans proposed will not be proper here.

1. Provide yourself with about 100 old newspapers; or other coarse paper about equal to that in quantity and texture. Let these papers be very thoroughly dried. This will be a sufficient stock for the season.

2. Procure two smooth inch-boards of the size of half of a paper; also a weight of lead, stone or other substance, of twenty pounds.

3. Gather 3 or 4 specimens of each plant, as it comes in flower. Let the specimens be so large as to include the various parts of the plant. If it be a small plant, take the root also. If large take it in two pieces; one to include the flower and parts adjoining, the other the root-leaves, if any, and those near the root. Place these between the folds of the papers, as nearly in their natural state as possible. If the plant curved, let in curve in the papers; if the flowers drooped in the field or woods, let it droop in the papers, &c. Lay the papers between the boards with the weight upon them. If 20 or 30 filled papers lie upon each other, it is all the same.

4. Twice or three times each week lay your papers, containing plants, separately in the sun,

with small stones on the corners, for three or four hours. When taken in, put them in press again.

5. As fast as your plants become dry, put them up in books made of the same paper, with about a dozen sheets in each. Most plants will be fit to put up, after suning five times, and pressing two weeks. When the roots are taken up, if bulbous, they should be immersed in boiling water, or they will be very long in drying. Most evergreens and succulent plants, except aquatics, should be immersed in boiling water, or they will drop their flowers, &c.

6. After the season is past (which is about the end of November) make a large book of stiff printing paper; and fasten one or more of your best specimens of each species to the first page of each leaf. Put as many specimens on a leaf as will fill it up; leaving room for names, &c. under each. Some glue them on; others cut through the papers and raise up slips, like loops, and run the specimens under these loops. The latter method is best and cheapest.

Your herbarium will now be ready to send to the practical botanist, as before mentioned.

It may be proper to observe, that if a long season of wet weather occur, or if you have not time or convenience for drying your papers in the sun while containing the plants, you may effect the same object by drying other papers thoroughly by a fire, and then shifting your plants into them.

Plants should never be dried so as to become brittle. They should resemble the state of well dried hay. The object in drying them between papers is; to prevent their crisping, and to retain more of their natural colour and texture, than can

be done openly. But still many plants cannot possibly be made to retain their natural colours.

Simple and woods flowers abound in the fore part of the season; compound and field flowers come most after the middle of July. An industrious collector will have 400 species by the first of July; and will find 250 species afterwards, before the season closes. See efflorescentia, temperature, and species.

Herbarius. An herbist. One who collects and sells plants.

HERMAPHRODITE. See perfect.

HEXAGONAL, *hexagonus.* Six-cornered.

HEXAGYNIA. (*Exa*, six; *gune*, female.) Six-styled. The name of the sixth order in each of the first thirteen classes. Plants of either of these classes with six styles or sessile stigmas are of the 6th order of such class; as Wendlandia is of the 6th order of the 6th class.

HEXANDRIA. (*Ex*, six; *andra*, male.) Six stamened. The name of the sixth class. It comprises all plants, whose flowers are perfect; with six stamens in each, not united by their filaments in one or two sets, nor regularly with 4 longer than the other 2. Liliaceous plants belong here.

It is also the name of the 6th order in those classes, where the characters of the first thirteen classes are taken for orders; as fumaria and corydalis in the class *diadelphia*, aristolochia (birthwort) in the class *gynandria*, wild-rice (zizania) in the class *monœcia*, green-briar (smilax) in the class *diœcia*.

HEXANDROUS. Belonging to, or varying into, the class *hexandria*.

HEXAPETALOUS. Six-petaled.

Hexapetaloides. A one-petalled corol so deeply divided as to appear 6-petalled.

Hexaphyllus. 6-leaved.

Hians. See gaping.

Hilum. The external scar or mark on a seed, where the funicule, or thread, is attached to it and conveys its nutriment till ripe.

Hirsute, *hirsutus.* Rough-haired. Covered with stiffish hairs, but hardly stiff enough to be called bristles.

Hirtus. Covered with short stiff hairs. Nearly the same as hirsute.

Hispid, *Hispidus.* Bristly. Beset with stiff hairs, or rather with bristles, which are very short. Perhaps it differs from hirtus only in having the hairs shorter and stiffer. It seems to be applied in some cases, however, where the bristles are not very short.

Hiulcus. Cracked open; a gaping chink.

Hoary. Whitish coloured, arising from a scaly mealiness. See glaucous.

Holeraceous. Suitable for a pot-herb.

Hollows. (thalamia.) That kind of receptacle of *lichens*, which is spherical, nearly closed, lodged in the substance of the frond, lined with its proper coat, under which are cells 2 or 4-seeded. Each hollow finally opens by an orifice in the surface of the frond above. Smith.

Honey-cup. See nectary.

Hooded. See cowled.

Hoof-form. See ungulatus.

Hook. See hamus.

Horarius. Continuing but an hour.

Horizontal. Parallel to the horizon. Leaves are horizontal, when they form right angles with erect stems.

Horn. See spur.

Horn-form. Shaped like a horn, or rather like a cock's spur. See spur.

Horologium. A botanist, who watches the progress of vegetables as they approach maturity, particularly the developement of flowers, through every hour of the day. A table kept of such progress is called, by the French, *horologe.*

Humidus. Moist, humid.

Hamifuse, *humifusus.* Spread over the ground. Richard defines it; spread on the ground and not rooting.

Humilis. Low, humble.

Husk. The larger kind of glume; as the husks of Indian corn.

Hyaline, *hyalinus.* Colourless. Transparent like glass or water.

Hybernicle, *hybernaculum.* See bud.

Hybernalis. Growing in the winter season.

Hybrid, *hybrida.* A mule. A vegetable produced by the mixture of two different species. The seeds of hybrids will not propagate. They are produced by sprinkling the stigma with the pollen of a different species. Care must be taken in such cases to prevent any pollen of its own species from falling on it first.

Hyemalis. Growing in the winter season.

Hypocrateriformis. See salver-form.

Hymenium. An exposed or naked, dilated, appropriate membrane of gymnocarp fungi, in which the seeds are imbedded.

I

Jagged. See laciniate.

Jaws. See faux.

Icones plantarum. Figures or drawings of plants.

Icosandria. (*Eikosi,* twenty; *andra,* male.) Twenty-stamened. The name of the 12th class. It comprises all plants, whose flowers are perfect, with 20 or more stamens growing on the inside of the calyx, not on the receptacle. Some authors say, any number of stamens over 12, provided they grow to the calyx. Lithrum, however, has the stamens on the calyx; also agrimonia, and they are not always constant in the number of stamens. Perhaps the better way is to leave this class as Linneus left it; and annex the genera, which vary from it, to the end of orders in the usual way.

The calyx is always monophyllous and the claws of the petals fixed into the inside of it along with the stamens.

Icosandrous. Belonging to, or varying into, the class *icosandria.*

Icterus. The change of colour in leaves in autumn.

Imberbis. Beardless. See beard.

Imbricate, *imbricatus.* Leaves, scales, &c. lying over each other, or one covering the place where two others meet, like the shingles or tyles on a roof.

Immersed. See submersed.

Impari-pinatus. Unequally pinnate. When a pinnate leaf is terminated by a single or odd leafet.

Imperfect, *imperfectus.* Wanting the stamen or pistil. No flower is perfect without both organs; but with an anther and stigma the flower is perfect, though destitute of calyx and corol.

Inæqualis. Unequal, which see.

Inæquivalvatus. Valves of capsule or glume unequal.
Inanis. Having a spongy pith.
Inapertus. Hollow, but without any opening.
Incanus. See hoary.
Incarnatus. Flesh-coloured.
Incisus. Cut in like a gash with a knife, but not deep enough to be called a cleft. If the crenatures or serratures of a leaf are cut down, to appearance, with a slit or gash, this term applies.
INCLINED, *inclinatus.* Bent towards each other. Also bent towards something different.
INCLUDING, *includens.* One thing containing another within it; as the calyx shutting up the seed, capsule or corol.
Inclusus. Enclosing. Opposed to exsert.
INCOMPLETE. See complete.
Inconspicuus. Not apparent without the aid of a magnifier.
INCRASSATE. Thickening. When a flower-stem grows thicker upwards towards the flower.
INCREMENT. The quantity of increase.
INCUMBENT, *incumbens.* Leaning upon or against. When an anther lies, as it were, somewhat horizontally upon the top of the filament.
INCURVED *incurvatus.* Bent inwards. As a leaf bent in at the point towards the stem, a filament towards the pistil, a prickle towards the stem.
INDIGINOUS. Plants, growing naturally and originally in a country, are indiginous to that country. It is often very difficult to determine, whether a plant is exotic or indiginous. Who can say, whether the chess (bromos secalinus) stone-seed (lithospermum arvense) and cockle (agrostemma githago) are native or exotic?
Indivisus. Undivided. Not cleft into parts. It may

however be serrate, crenate or toothed; it is therefore not the same as entire.

Indurescens. Becoming hard, tough, or leathery.

Indusium. A shirt. It is used by some authors for the thin membranous covering on the fruit of ferns. But Smith prefers retaining the old name, *involucre*, which see.

Inermis. See unarmed.

Inferna. Downwards. Towards or near the base or root.

INFERIOR, *inferus.* Below. A calyx or corol is inferior when it comes out below the germ. See germ.

Infimus. At the very bottom or base, lowest.

INFLATED, *inflatus.* Appearing as if blown up with wind. A very small degree of inflation is sometimes noticed in descriptions; as the calyx in *silene.*

INFLEXED, *inflexus.* The same as incurved. Smith.

INFLORESCENCE, *inflorescentia.* The mode by which flowers are connected to the plant by the peduncle. It is of 10 kinds. 1. Whorl. 2. Raceme. 3. Penicle. 4. Thyrse. 5. Spike. 6. Umbel. 7. Cyme. 8. Corymb. 9. Fascile. 10. Head. See each in its place.

Infractus. Bent in with such an acute angle as to appear as if broken.

Infundibiliformis. See funnel-form.

Inodorus. Having no smell.

Insertus. Inserted, fixed to or on.

Insidens. Sitting upon.

Insignitus. Marked.

Instructus. Furnished with.

Integer. See entire.

Integerrimus. Very entire, having no indentation whatever.

INTERFOLIACEOUS. Situated along the stem between the origin of the leaves, not opposite to them.

Intermedius. Between two extremes.

INTERNODE, *internodius.* The space between joints or knots.

Internus. Within the inside.

Interpositus. Placed between.

Interrupte. Interruptedly.

INTERRUPTED, *interruptus.* A spike is interrupted, when leaves or smaller flowers are interposed at intervals.

INTERRUPTEDLY PINNATE. When smaller leafets are interposed among the larger; as the potatoe and agrimony leaves.

Intimus. Entirely within.

INTORSION, *intorsio.* Twisting, twing or bending from a strait upright position. See twining, contorted and twisted.

Intortus. Twisted inwards.

INTRAFOLIACEOUS. Within the leaf. A stipule is intrafoliaceous, when it originates a little above the origin of the petiole, which brings it, as it were, within the bosom of the leaf.

Introrsum. Inwardly.

INVERSELY HEART-FORM. See obcordate.

Inundatus. See submersus.

INVOLUCRE, *involucrum.* That kind of calyx which comes out at a distance below the flower, and never encloses it like the spathe. It is further distinguished from the spathe in being of a leafy texture and colour, whereas the spathe is generally membranaceous or coloured. It is generally found at the origin of the peduncles of umbels; and sometimes attached to other aggregate flowers. When it is all on one side it is called *dimidiate,* halved. See partial.

Involucres of ferns generally lie on the tops of the capsules, like a piece of linen spread out to dry; hence they are called *indusium*, a shirt. They are denominated *corniculatum*, when cylindric, hollow and enclosing the seed.

INVOLUCRED, *involucratus*. Having involucres.

INVOLUCEL. A partial involucre, or a little involucre.

Involvens. Arching over.

INVOLUTE, *involutus*. Rolled inwards. A term in foliation; applied to leaves whose opposite margins are rolled in and continued rolling, till the two rolls meet on the midrib and parallel to it.

JOINTS. Swelling knots, rings, or narrowed interstices, at regular intervals along glumes, pods, spikes, leaves, &c.

JOINTED. Having joints.

IRREGULAR, *irregularis*. Differing in figure, size, or proportion of parts, among themselves.

IRRITABILITY. The power of being excited so as to produce contractile motion. That there is such a thing as vegetable irritability is evident to every one, who examines the common barberry flower. Touch the inside of a stamen near its base with the end of a horse-hair, or any thing about the same size, and it will instantly strike its anther against the pistil and shoot a quantity of pollen upon the stigma, or in that direction.

Isthmis. Long narrow joints in legumes or loments.

Jugum. Yoke. In pairs.

Julus. See ament.

K

KEEL. The lower petal of a papilionaceous corol. The stamens and pistils lie enclosed in it.

KEELED. Having a ridge resembling the keel of a boat or ship. A leaf, capsule, calyx, &c. is keeled when it has the midrib, angle, or peculiar process, running along the back of a compressed form, and attached by one edge.

KERNEL. See nucleus.

KIDNEY-FORM. Hollowed in at the base with rounded lobes and rounded end. Its breadth is generally as great as its length.

KNEED. See geniculate.

KNOBBED. In thick lumps; as potatoes.

KNOBS. (Cephalodia.) That kind of receptacle of lichens, which is convex, more or less globular, covered externally with a coloured seed-bearing crust, and placed generally at the extremities of stalks, originating from the frond, permanent; rarely sessile. Sometimes they are at first *spangles* on filamentous lichens, and afterwards become convex irregular knobs. They are simple, compound or conglomerate. Smith.

KNOT. A swelling joint. See joints.

KNOTTED. Having swelling joints.

KNOTLESS. Without swelling joints. See enode.

L

LABIATE. Having lips; or a calyx or corol divided at top into two general parts, somewhat resembling the lips of a horse or other animal.

Labiate corols are divided into *ringent* and *personate.*

Ringent, such as have the lips open or gaping.

Personate, such as have the lips closed or muffled.

Labyrinthiformis. Winding and turning by various involutions and contortions like a labyrinth.

LACERATED, *lacerus.* Torn. Cut, or apparently torn, into irregular segments.

Lacinia. The division of a calyx, corol, leaf, &c. into which they are cleft, torn or divided.

LACINIATE, *laciniatus.* Jagged. Irregularly divided and subdivided, cut or torn. Hardly different from lacerated.

LACTESCENCE, *lactescentia.* Milkinesss. The milky juice of some plants; as the milkweed (asclepias.) It is also called by this name, when the juice is red; as in the bloodroot (sanguinaria.)

Lacteus. Milk-white.

LACUNOSE, *Lacunosus.* Hollow between the veins of a leaf. When the blisters are under side of the leaf instead of the upper. See bullate.

Lacustris. Growing most naturally in or about lakes.

Lævis. Smooth, even, polished; not striate, or wrinkled.

Lamella. A thin plate. Applied to the gills or vertical plates under the hat or pileus of the agaric fungus, or toadstool.

—— *equalis.* When all the gills reach from the stem to the margin of the hat.

—— *inequalis,* or *interruptus.* When some reach but part of the way.

—— *biserialis.* When a long and short gill alternate.

—— *triserialis.* When 2 long and 2 short gills alternate in pairs.

—— *ramosæ.* When several gills unite in one, so as to appear branched.

—— *decurrens.* When they run down the stem more or less.

—— *venosæ.* When so narrow as to have the appearance of veins.

LAMELLATE. In the form of thin plates, or having thin plates.

LAMINA. The broad upper part of the petal of a polypetalous corol. See petal.

LANATE, *lanatus.* Woolly. Covered with curly, crooked, close, thick pubescence. Not so fine, nor so closely matted together as *tomentose.*

LANCEOLATE, *lanceolatus.* In the form of the lance of the ancients. When the length greatly exceeds the breadth; and it tapers gradually from near the base to the apex.

LANCE-OVATE, &c. *lanceolato-ovatus, &c.* Pertaking of the lanceolate form and of that with which it is compounded.

Lanugo. Down.

Laterifolius. Side-leaved.

LATERAL, *lateralis.* On one side.

Latifolius. Broad-leaved.

Lateritius. Brick coloured.

Latitans. Hidden, concealed.

LAX, *laxus.* Limber. See flaccid.

LEAF. That part of most vegetables, which presents more surface to the atmosphere, than all other parts; and consists principally of the cellular integument covered with the cuticle. Leaves imbibe and give out moisture; generally more with one surface than the other. Aquatic leaves perspire faster than dry-land leaves; which is the reason for their drying so much sooner. Some leaves imbibe sufficient moisture from the atmosphere for their support for a long time; as the common live-forever will grow, if broken off and stuck up in a dry place.

Leaves are divided into *simple*, when one leaf grows on one petiole; and *compound* when several leafets grow on one petiole.

They are *evergreen*, remaining through the winter; or *deciduous*, falling off at the close of the year.

They are farther distinguished by their *forms*, *surfaces*, and *positions*. All of which are described under their peculiar names.

LEAFING SEASON. That time in the year when most leaves come out. In North America the proper leafing season is in April.

LEAFET, or LEAFLET. One of the lesser leaves which, with others, constitute a compound leaf. A simple leaf is never a leafet, however small.

LEAFLESS. Destitute of leaves, naturally. This term does not apply in cases of *defoliation*, which see.

LEAF-STALK. See petiole.

LEAFY. Furnished with leaves. Abounding in leaves. Leaves intermixed with flowers on a spike.

LEATHERY. See coriaceous.

LEGUME, *legumen*. A pod, without a longitudinal partition, with its enclosed seeds attached to one suture only; as the pea. Those with transverse partitions are usually called *loments*, which see.

LEGUMINOUS. Bearing legumes.

LENTICULAR, *lenticularis*. Lentil-form. It is applied to a kind of glandular roughness on the surface of some plants.

LEVEL-TOPPED. See fastigiate.

LIBER. The innermost layer of the bark, or the last year's deposit. Smith, page 25.

Libera. Free, not adnate, or attached.

LICHENES. See cryptogamia.

LID of MOSSES. See operculum.

Light. Various motions and inclinations of plants prove the effect of light upon them. Trees present their leaves outwards in quest of light, because it is darkest in the centre. Plants in a greenhouse all present the upper surfaces of their leaves towards the enlightened side of it. Wheat heads hang towards the sun. Most compound flowers follow the sun through the day. Plants deprived of light loose their green hue; as potatoe tops growing in a dark cellar.

Lignous, *lignosus*. Woody.

Lignum. See wood.

Ligulate, *ligulatus*. (*Ligula*, a strap or garter.) That kind of floret, in some compound flowers, which consists of a single strap-like petal which becomes tubular at the base only; as all the florets in a dandelion, and the ray florets in a sunflower.

Lilia, lilies. The family of lilies. See gentes.

Liliaceous. A corol with six petals spreading gradually from the base, so as altogether to exhibit a bell-form appearance.

Limb, *limbus*. The broad spreading part of the petal of a monopetalous corol.

Line, *linea*. The breadth of the crescent at the root of the finger nail.

Linear, *linearis*. Continuing of the same breadth throughout most of the extent. Linear leaves always, or with very few exceptions, become narrowed or pointed at one or both ends.

Lineate, *lineatus*. Marked with lines.

Linguiform. Tongue-like. Thick, fleshy, linear, blunt at the end.

Liontoothed. See runcinate.

Lip, or lipped. See labiate.

Lirellæ. See cleft.

Littoralis. Growing on the sea-coast; also on the shores of rivers.

Lividus. Dark grey inclining to violet.

Lobe, *lobus.* Divisions, which are rounded, or parted by rounded or curved incisions. Sometimes it seems to be applied to cases where it has nothing to distinguish it from a segment cut off by a cleft incision, except by its being larger.

Lobed, *lobatus.* Divided into lobes. Deeply parted, with the segments distant or spreading and large.

Loculamentum. See cell.

Loculus. The little cell of an anther, which contains pollen.

Loment, *lomentum.* A legume pod with transverse partitions. This term is generally applied to the legumes in the Natural Order Lomentaceæ.

Longifolius. Longleaved. See relative proportions.

Longissimus. Very long.

Longus. Rather long. See relative proportions.

Loose. Open, not compact.

Lorula. The long threads of Usnea. This lichen, so common on trees, is erroneously called moss by most people.

Lucidus. Bright, shining. Nearly the same as nitidus.

Lunulate, *lunulatus.* Shaped like a *crescent*, which see.

Lurid, *luridus.* Of a palish, dull, deathly colour. Most plants with lurid petals are more or less poisonous; as tobacco, henbane, thorn-apple.

Lutescent, *lutescens.* Approaching to a yellow colour.

Luteus. Yellow.

Luxuriant, *luxurians.* See full-flowered.

Lyrate, *lyratus.* Pinnatifid, with the division at the apex largest.

LYRATE-PINNATE. Pinnate with the odd terminal leafet largest.

M

Maculatus. Spotted.

MANE. See staminate.

Manifestus. Very apparent.

MANY. Whenever there are more than are usually numbered of that kind; as we say, 1-seeded, 2-seeded, 3-seeded, 4-seeded, many-seeded.

Marcescens, or *marcidus.* See withering.

Marginatus. Having a margin differing in some measure from the disk.

MARGIN, *margo.* The circumference or edge. See border.

Maritimus. Growing naturally near the sea-board. It may be extended several miles from the water.

MARROW. See pith.

Masculus. See staminate.

MASKED. Personate. See labiate.

MATURE, *maturus.* Full-grown, but not entered upon a state of decay.

MEASURES. Proportion between parts is better than any measure. But when measures are adopted, they should be taken from parts of the hand and arm. Because the parts of plants vary about as much as the hand; and in adopting these measures the same allowance should be made.

1. *Line*, the crescent at the root of the nail. About one-twelfth of an inch. 2. *Nail* (unguis.) Length of the nail. About half an inch. 3. *Inch* (pollex.) Length of the first joint of the thumb. 4. *Palm.* Breadth of the four fingers. About 3

inches. 5. *Short-span* (spithama.) Distance between ends of thumb and fore-finger. About 7 inches.

Long-span (dodrans.) Distance between ends of thumb and little finger. About 9 inches.

Foot (pes.) Distance between the point of the elbow and the second joint of the thumb. About 12 inches.

Cubit (cubitus.) Distance between the point of the elbow and of the middle finger. About 18 inches.

Arm (brachium.) Distance between armpit and the end of middle finger. About 24 inches.

Fathom (orgya.) Distance between the ends of the middle fingers, when the arms are extended.

MEDICINAL, *medicinalis.* Plants possessing principles sufficiently active to entitle them to a place among the *materia medica.* Many physicians daily trample underfoot plants, which possess similar qualities with those which they purchase from Europe, and often the very same plants; but being ignorant of those botanical principles by which the names and properties of plants are ascertained, they are consequently ignorant of the absurdity. See qualities.

Mediocris. Averaging in dimensions compared with other parts. See relative proportions.

Medius. In the middle. This term is used when one part is between the other parts, though sometimes much nearer one than the other; as a bract is in the middle of the peduncle, when it is much nearer the flower than to the base of the peduncle. This name is sometimes given to species holding a middle place between extremities, expressed by the names of other species of the same genus.

Medula. See pith.

Mellifera. Producing or containing honey.

Melligo. Honey-dew on leaves.

MEMBRANACEOUS. Made up, apparently, of the two plates of the cuticle, without any cellular integument between them. Nearly transparent, very thin and colourless.

Membranatus. Flattened and resembling a membrane.

Mensura. See measures.

METHOD, *methodicus.* A mode of arranging plants in classes, orders, &c. Richard has 14 pages on this head; in which he gives the methods of Tournefort and Linneus at length. But as we have given the method of Linneus under Systematic Terminology, and throughout the Dictionary; and as Tournefort's method is no where adopted in this country; this article is principally omitted.

It may be observed that:

TOURNEFORT'S METHOD

Divides plants into *herbs* and *trees.* The HERBACEOUS plants are divided into 17 classes. Fourteen of these are distinguished by the *form* of the *corols*; as, 1. *Infundibiliformis.* 2. *Personate*, &c. The other 3 classes are *apetalous* and distinguished by *having stamens, no apparent flowers, and no apparent seed.* The TREE kinds are divided into 5 classes.

MIDRIB. The main or middle rib of a leaf running from the stem to the apex.

Miliaris. In the form of millet seed.

Miniatus. Scarlet, vermillion colour.

Minutissimus. Extremely small or minute.

Molendinacea. Many winged.

Mollis. Soft.

MONADELPHIA. (*Monos*, one; *adelphos*, brotherhood.) One brotherhood. The name of the 15th class. It comprises all plants, whose flowers are perfect

with the stamens united by their filaments in one set and the flowers not papilionaceous.

It is alo the name of the 16th order in those classes, where the characters of the firt 13 classes are taken for orders. Though this is not of the first 13 classes; yet it is adopted upon the same principle in the class *monœcia* and *diœcia;* as the pine, white cedar, cucumber, squash, &c. in the former; and red cedar, yew, &c. in the latter.

MONADELPHOUS. Belonging to, or varying into, the class *monadelphia.*

MONANDRIA. (*Monos,* one; *andra,* male.) One-stamened. The name of the second class. It comprises all plants, whose flowers are perfect, with one stamen in each, not growing on the pistil.

It is also the name of the first order in those classes, where the characters of the first 13 classes are taken for orders; as the *orchis* and *asathusa* in the class *gynandria.*

MONILIFORM. See granulate.

MONŒCIA. (*Monos,* one; *oikos,* house.) The name of the 21st class; or the 20th, if the 18th be rejected. It includes those plants whose flowers are not perfect, but the stamens and pistils grow in different flowers on the same plant. As in the Indian corn, the stamens are in the tassels, and the pistils are the silks of the ear.

MONŒCIOUS, or *monoicus.* Belonging to, or varying into, the class monœcia.

MONOGYNIA. (*Monos,* one; *gune,* female.) One-pistilled. The name of the first order in each of the first 13 classes. It comprises all plants in each class, respectively, whose flowers have two styles in each; or, if the styles are wanting, two sessile stigmas; as *samphire* (salicornia) in the class *monandria, lilac* (syringa) in *diandria, Iris* in *trian-*

dria, plantain in *tetrandria, mullein* in *pentandria, lily* in *hexandria, horse-chesnut* in *heptandria, laurel* (Kalmia) in *decandria, purslane* in *dodecandria, cherry* in *icosandria, popy* in *polyandria.*

MONOPETALOUS. The whole corol in one piece. Sometimes it is so deeply parted, that it appears to be polypetalous until it is pulled off and closely examined at the base. In most monopetalous corols the stamens are attached to the tube. They are divided into Bell-form, Funnel-form, Salver-form, Wheel-form, and Labiate, which see.

MONOPHYLLOUS. (*Monos*, one; *phullon*, a leaf.) One-leafed. A calyx all in one piece. All the calyxes in the class *icosandria* are of this kind. They are often so deeply divided, that a student may mistake them for polyphyllous, without particular attention.

Monopyrenus. Enclosing but one nut or stone.

Monospermus. One seed to a flower.

Monostachyos. (*Monos*, one; *stachus*, spike.) Single spiked.

MONSTROUS. Plants producing any part different from the same part, when growing wild. As the rose has but five petals in a wild state; but, by rich cultivation in gardens, the stamens are mostly changed to petals. Carnations and peony are examples also. These are all monsters. See florist and full-flowered.

Montanus. Growing most naturally on mountains.

MOON-FORM. See crescent form.

MOSSES. See musci.

MOUTH. See faux.

Mucidus. Resembling mouldiness, or mucor.

MUCRONATE, *mucronatus.* Having a rounded end, tipped with a prickle; which often appears rather an extension of the midrib.

MULE. See hybrid.

Multangularis. Many-angled. Having several corners or ridges.

Multicapsularis. Many-capsuled. Several capsules to each flower.

Multicaulis. Producing many stems.

Multidentatus. Many-toothed.

Multifidus. Many-cleft.

Multiflorus. Many-flowered.

Multilobus. Many-lobed.

Multilocularis. Many-celled.

Multipartitus. Many-parted.

Multiplex. Many-fold. Having petals lying over each other in two rows.

MULTIPLIED, *multiplicatus.* See full-flowered.

Multisiliquosus. Many pods proceeding from the same point.

Multivalvis. A glume with many chaffs or valves.

Multoties. Often times.

Muniens. Leaves drooping down and hanging over the stem, &c. at night.

Munitus. See fenced.

MURICATE, *muricatus.* Armed with sharp spines. Covered with subulate prickles.

MUSCI, MOSSES. The second order of the class *cryptogamia.* All mosses have lids on the capsules. See *cryptogamia.*

Muticus. See awnless.

MUTILATED, *mutilatus.* Not producing parts with their full complete forms.

N

NAKED. Wanting a covering analagous to that of most plants. As stem without leaves, leaves without pubescence, corol without a calyx, seed without a pericarp, receptacle without chaff, pubescence, &c.

Nanus. Dwarfish, very small.

NAP. See tomentose.

Napiformis. Resembling a turnip.

NATANT, *natans.* Floating. When the plant is fixed by the root at the bottom and its leaves float on the top of the water, as the pond lily, (nymphea.)

NATIONS. See gentes.

NATURAL CHARACTER. The description of the parts of fructification at large; without regard to any method: or at least so given as to be capable of being used under any method. See descriptions.

NATURAL CLASS. See natural orders.

NATURAL HISTORY. That department of Science, which treats of the productions of nature as they come from the hand of the Creator; without any decomposition or chemical analysis.

It is generally divided into four branches.

1. ZOOLOGY. Which includes all animals: as Beasts, Birds, Reptiles, Fishes, Insects, Snails, Clams, Worms and Corals.

2. BOTANY. Which includes all plants. As Palms, Grasses, Lilies, Herbs, Trees, Ferns, Mosses, Liverworts, Seaweeds and Mushrooms.

3. MINERALOGY. Which includes the unorganized mass of our globe. As Pit-coal, Common salt, Flint, Lime, Clay, Iron-ore, Silver-ore, Lead-ore, with the ore of 26 other metals, &c.

4. *Ærology.* Which includes the atmosphere and whatever floats in it. This takes in the natural history of lightning, meteors, &c. But it is more particularly concerned with clouds as it respects systematic arrangement. There are so few simple structures among clouds, that it affords little room for system. It is very convenient, however, in writing the description of a storm, &c. to know the few names applied to clouds.

Simple Clouds.

1. *Cirrose clouds*, are those fibrous clouds which resemble flax as it is gradually pulled from the distaff. They ascend higher than any other clouds; often to the distance of 5 or 6 miles.

2. *Cumulous clouds*, are those bright shining clouds, which have the base nearly straight, and the upper side in roundish shining heaps. They are seen floating in the horizon in detached masses, generally in fair weather and after a rain.

3. *Vellous clouds*, are those fleecy clouds, which fly swiftly about the sky, with an open texture without any defined side or base.

4. *Nimbose clouds*, are those dense clouds, which ascend from the horizon, at first with heads like the cumulous, which soon shoot into cirrose branches extending towards the zenith. They generally bring thunder-showers.

5. *Stratose clouds*, are those stratified horizontal ranges of vapours, usually called fog. As soon as the sun shines upon them, they ascend, and generally become cumulous clouds.

Compound clouds.

6. *Cirro-cumulous clouds*, are those which are formed of cirrose clouds, by their becoming, as it were, knotted or curdled into small heaps; and these often continue to unite till the clouds become

very extensive. As soon as cirrose clouds begin to settle down towards the lower regions of the atmosphere, they become cirro-cumulous.

7. *Cirro-stratose*, are those stratified masses seen above the horizon often at evening. They are also the clouds which shroud the sky in a steady settled rain. They are formed out of most of the simple kinds; but as they have a stratified form; often with cirrose extremities, they are called cirro-stratose.

8. *Cumulo-stratose*, are more rare; but a cirro-stratose is sometimes combined with a cumulous-like cloud, and extends upwards spreading out to great extent above; and standing, as it were, upon a stem in the horizon. It is sometimes called a mushroom-cloud.

NATURAL ORDERS. An arrangement of plants according to their natural affinities, without regarding their artificial characters. Such an arrangement is of great use both in finding out a plant, and in examining its relations and qualities.

It is considered advisable to insert here the two celebrated systems of Linneus and Jussieu. For this Dictionary is intended as an assistant in reading any system, which may fall into the hands of a student; and after he has found out a plant, he may be desirous to examine it by these systems.

Linneus supposes (Rose, Milne and others follow his opinions, and Cullen in some measure,) that plants of the same natural order possess similar medical qualities. But the scent of plants must certainly be taken into consideration; as all nauceous scented umbelliferous plants are poisonous, while the sweet-scented are pleasant stomachics, &c. See qualities. The medical qualities are annexed from Milne, Woodville, Thornton and

others, that the student may avail himself of whatever advantage can be derived from such natural affinities. "Several plants characterized by a "particular virtue, possess it to such a degree of "strength or weakness, that we may reasonably "expect very different effects from this difference "of intensity in the same quality." Milne.

Natural Orders of Linneus.

1. Palmæ. Palms and their relatives; as Cocoanut, Frog's bit. *Farinaceous diet.*

2. Piperitæ. Pepper and its relatives. In crowded spikes; as Indian-turnip, sweet-flag. *Tonics* and *stomachics.*

3. Calamariæ. Reed-like grasses, with culms without joints; as cat-tail, sedge. *Coarse cattle fodder.*

4. Gramina. The proper grasses with jointed culms; as Wheat, Rye, Oats, Timothy grass, Indian corn. *Farinaceous diet* and *cattle fodder.*

5. Tripetaloideæ. Corol 3-petalled or calyx 3-leaved; as Water plantain, Rush grass, Arrowhead. *Tonics* and *rough cattle fodder.*

6. Ensatæ. Liliaceous plants with sword-form leaves; as Iris, Blue-eyed grass, Virginian spiderwort. *Antiscorbutics* and *Tonics.*

7. Orchideæ. With fleshy roots, stamens on the pistils, pollen glutinous, flowers of singular structure with the germ inferior; as Ladies'-slipper, Arathusa. *Farinaceous diet* and *Stomachics.*

8. Scitamineæ. Liliaceous corols, stems herbaceous, leaves broad, germen blunt-angular; as Ginger, Turmeric. *Warming stomachics.*

9. Spathaceæ. Liliaceous plants with spathes;

as Daffodil, Onion, Snow-drop. *Secernant stimulants.*

10. Coronariæ. Liliaceous plants without spathes; as Lily, Tulip, Star-grass. The nauceous scented are *antiscorbutic* and *cathartic*, the others *Emollient.*

11. Sarmentaceæ. Liliaceous corols with very weak stems; as Smilax, Asparagus, Bell-wort. *Tonics* and *Secernant stimulants.*

12. Oleraceæ, or Holeraceæ. Having flowers destitute of beauty, at least of gay colouring; as Beet, Blight, Pig-weed, Dock, Pepperage. If naceous, *Cathartic;* others, *mild stimulants* and *nutrientics.*

13. Succulentæ. Plants with very thick succulent leaves; as Prickly-pear, House-leek, Purslain. *Antiscorbutic* and *Emollient.*

14. Gruinales. Corols with five petals, capsules beaked; as Flax, Wood-sorrel, Cranebill. *Tonics* and *Refrigerants.*

15. Inundata. Growing under water and having flowers destitute of beauty; as Hippuris, Pond-weed. *Astringents.*

16. Calycifloræ. Plants without corols, with the stamens on the calyx; as Poet's cassia, Seed buckthorn. *Astringents* and *Refringerants.*

17. Calycanthemæ. Calyx on the germ or growing to it, flowers beatiful; as Willow-herb, Ludwigia, Œnothera. *Astringents.*

18. Bicornes. Anthers with two strait horns; as Whortleberry, Spicy and bitter Wintergreen, Laurel. *Astringents.*

19. Hesperides. Sweet-scented, leaves ever-

green; as Myrtle, Cloves, Mock-orange. *Astringent* and *stomachic.*

20. ROTACEÆ. Corols wheel-form; as Gentian, St. John's wort. *Tonics.*

21. PRECIÆ. Plants with early spring flowers of an elegant specious appearance; as Primrose. *Astringents.*

22. CARYOPHYLLEÆ. Plants with caryophyllous corols; as Pink, Cockle. *Astringent* and *Secernant stimulants.*

23 TRIHILATÆ. Flowers with 3 stigmas, capsules inflated and winged, and generally 3-seeded with distinct hilums; as Nasturtion, Horse-chesnut. *Tonics* and *Nutrientics.*

24. CORYDALES. Corols spurred or anomalous; as Fumatory, Touch-me-not. *Narcotic* and *Antiscorbutic.*

25. PUTAMINEÆ. Plants which bear shell-fruit; as Caperbush. *Detergent* and *Antiscorbutic.*

26. MULTISILIQUE. Having several pod-form capsules to each flower; as Columbine, Larkspur, Rue, American cowslip. *Cathartic* and *Caustic.*

27. RHŒADEÆ. Plants with caducous calyxes, and capsules or siliques; as Poppy, Bloodroot, Celandyne, *Anodyne* and *Antiscorbutic.*

28. LURIDÆ. Corols lurid, mostly monopetalous; flowers Pentandrous, or Didynamous with capsules; as Tobacco, Thorn-apple, Nightshade, Foxglove. *Narcotic* and *Antiscorbutic.*

29. CAMPANACEA. Having bell-form corols, or those whose general aspect is somewhat bell-form; as morning glory, Bell-flower, Violet, Cardinal flower. *Cathartics* and *Secernant stimulants.*

NATURAL ORDERS OF LINNEUS.

30. CONTORTÆ. Corols twisted or contorted; as Milk-weed, Periwinkle, Choak-dog. *Cathartics* and *Antiscorbutics.*

31. VEPRECULÆ. Having monophyllous calyxes, coloured like corols; as Leatherwood, Thesium. *Antiscorbutic* and *Emetic.*

32. PAPILIONACEÆ. Having papilionaceous flowers; as Peas, Beans, Locust tree, Clover. *Emollient, Diuretic, Nutrientic.*

33. LOMENTACEÆ. Having legumes or loments, but not perfect papilionaceous flowers; as Cassia, Sensitive plant. *Emollient, Astringent, Cathartic.*

34. CUCURBITACEÆ. Fruit pumpkin-like, anthers mostly united; as Melons, Cucumbers, Passion-flower. *Cathartic* and *Refrigerant.*

35. SENTICOSÆ. Prickly or hairy, with Polypetalous corols and a number of seeds either naked or slightly covered; as Rose, Raspberry, Strawberry. *Astringent* and *Refrigerant.*

36. POMACEÆ. Having many stamens on the calyx, and drupaceous or pomaceous fruit; as Pear, Currant, Cherry, Peach. *Refrigerants.*

37. COLUMNIFERÆ. Stamens united in the form of a column; as Hollyhoc, Mallows, Cotton. *Emollient.*

38. TRICOCCÆ. Having 3-celled capsules; as Castor oil plant, Spurge, Box. *Cathartic.*

39. SILIQUOSÆ. Having silique pods; as Cabbage, Mustard, Shepherd-purse. *Diuretic, Antiscorbutic, Nutrientic.*

40. PERSONATÆ. Having personate corols; as Snapdragon, Monkey-flower. *Diobstruents* and *Cathartics.*

NATURAL ORDERS OF LINNEUS.

41. Asperifoliæ. Corols monopetalous, with 5 stamens, seeds 4, naked, leaves rough; as Comfrey, Stone-seed (lithospermum.) *Astringents* and *Diobstruents.*

42. Verticillata. Having Labiate flowers; as Sage, Thyme, Catmint, Motherwort. *Stomachics* and *Astringents.*

43. Dumosæ. Bushy pithy plants with small flowers, petals in 4 or 5 divisions; as Sumach, Elder, Holly. *Tonic* and *Cathartic.*

44. Sepiariæ. Having mostly tubular divided corols with few stamens; being ornamental shrubs; as Lilac, Jasmine. *Astringent.*

45. Umbellatæ. Flowers in umbels with 5-petalled corols, stamens 5, styles 2 and 2 naked seeds; as Fennel, Dill, Carrot, Poison-hemlock. *Stomachic* and *Narcotic.*

46. Hederaceæ. Corols 5-cleft, stamens 5 to 10, fruit berry-like on a compound raceme; as Grape, Ginseng, Spikenard. *Tonics* and *Refrigerants.*

47. Stellatæ. Corols 4-cleft, stamens 4, seeds 2, naked, leaves mostly whorled; as Bedstraw, Dogwood, Venus' pride. *Tonics* and *Diobstruents.*

48. Aggregatæ, Having aggregate flowers; as Button-bush, Marsh-rosemary. *Tonics* and *Secernant stimulants.*

49. Compositæ. All the compound flowers; as Sun-flower, Boneset, Tansey, Thistle. *Tonics* and *Secernant stimulants.*

50. Amentaceæ. Bearing pendant aments; as Hazle, Oak, Chesnut, Willow. *Astringents.*

51. Coniferæ. Bearing strobiles; as Pine, Juniper, Cedar. *Tonics* and *Stomachics.*

NATURAL ORDERS OF JUSSIEU.

52. Coadunatæ. Several Berry-like pericarps, which are adnate; as Tulip-tree, Magnolia. *Tonics.*

53. Scabridæ. Leaves rough, flowers destitute of beauty; as Nettle, Hemp, Hop, Elm. *Astringents.*

54. Miscellaneæ. Plants not arranged by any particular character; as Pond-lily, Pokeweed, Amaranth. Their qualities are *various.*

55. Filices. All ferns; as Brakes, Maidenhair. *Secernant stimulants.*

56. Musci. All mosses; as Polytrychum. *Cathartics* and *Secernant stimulants.*

57. Algæ. All Liverworts, Lichens and Seaweeds; as Jungermannia, Fucus, Usnea. *Tonics.*

58. Fungi. All fungusses; as Mushroom, Toadstool, Puffball, Touchwood, Mould. *Tonics* and *Cathartics.*

Natural Orders of Jussieu.

Jussieu's System is a very great improvement upon that of Linneus. But I have seen no attempt at giving the medical qualities of each order. According to the maxim of Linneus and others, the student has only to acquaint himself with the virtues of one or two plants, in order to be able to form some general opinion of all other plants in that order.

1st Division. *Seeds without lobes or cotyledons.*

1. Fungi. All fungusses. As Mushroom, Toadstool, Puffball.

2. Algæ. Lichens and Seaweeds. As Ulva, Usnea.

3. Hepaticæ. Liverworts. As Anthoceros, Jungermannia.

4. Musci. Mosses. As Hypnum.

5. Filices. Ferns. As Polypod, Brake, Maidenhair.

6. Naiades. Water plants. As Pondweed, Maretail.

2nd Division. *Seeds with a single lobe, or one cotyledon.*

7. Aroideæ. Indianturnip-like. As Skunk-cabbage, Sweet-flag.

8. Typhæ. Cattail-like. As the Burr-reed.

9. Cyperoidæ. Cyperus-like. As Sedge, Club-rush, Bog-rush.

10. Gramineæ. The proper grasses. As Wheat, Oats, Timothy-grass, Indian-corn.

11. Palmæ. Palm-like. As Cocoanut, Ground-rattan, Palmetto.

12. Asparagi. Asparagus-like. As Smilax, Solomon-seal, Yam.

13. Junci. Rush-like. As Arrow-grass, Virginian Spiderwort.

14. Liliaceæ. Lily-like. As Tulip, Dogtooth-violet.

15. Bromelia. Pineapple-like. As Agave, False moss.

16. Asphodeli. Asphodel-like. As Hyacinth, Onion, Star-of-Bethlehem.

17. Narcissi. Daffodil-like. As Star-grass, Pickerel-weed, Sea-Daffodil.

18. Irides. Iris-like. As Blue-eyed-grass, Ixia.

19. Musæ. Banana-like. No common example.

20. Cannæ. Indianreed-like. As Ginger.

NATURAL ORDERS OF JUSSIEU.

21. Orchideæ. Orchis-like. As Ladies' Slipper, Neottia, Cymbidium.

22. Hydrocharides. Frogbit-like. As Water-lily, Pond-lily.

3d Division. *Seeds with two lobes, or two cotyledons.*

23. Aristolochiæ. Birthwort-like. As Asarum.

24. Æleagni. As Pepperage, Sea-buckthorn.

25. Thymeleæ. As Leatherwood.

26. Proteæ. Silvertree-like. No common example.

27. Lauri. Camphor-like. Sassafras, Spice-bush.

28. Polygoneæ. Buckwheat-like. As Water-pepper, Dock.

29. Atriplices. Orache-like. As Pigweed, Pokeweed, Blite, Saltwort.

30. Amaranthi. Cockscomb-like. As Chaff-weed, False-knotgrass.

31. Plantagines. Plantain-like. As Ribwort.

32. Nyctagines. As Hogweed

33. Plumbagines. Leadwort-like. As Marsh-rosemary.

34. Lysimachiæ. Loosestrife-like. As Prim-rose, Brookweed.

35. Pediculares. Lousewort-like. As Milk-wort, Speedwell, Painted-cup.

36. Acanthi. Bearbreach-like. As Malabar-nut.

37. Jasmineæ. Jasmine-like. As Lilac, Ash.

38. Vitices. Chastetree-like. As Vervain.

39. Labiatæ. Rigent-flowered plants. As Sage, Mint, Motherwort.

40. Scrophulariæ. Figwort-like. As Hedge-hyssop, Snapdragon.

NATURAL ORDERS OF JUSSIEU.

41. Solaneæ. Nightshade-like. As Tobacco, Thorn-apple.

42. Boragineæ. Borage-like. As Comfrey, Stonecseed, Turnsole.

43. Convolvuli. Bindweed-like. As Dodder, Cypress-vine.

44. Polemonia. Greekvalerian-like. As Phlox, Cantua.

45. Bignoniæ. Trumpetflower-like. As Catalpa-tree, Snakehead.

46. Gentiana. Gentian-like. As Pinkroot, False-gentian.

47. Apocyneæ. Dogbane-like. As Milkweed, Choak-dog.

48. Sapota. As Bomelea.

49. Guaiacanæ. Lignumvitæ-like. As Date-plumb, Silverbell.

50. Rhododendra. Rosebay-like. As Laurel, Wild-honeysuckle.

51. Ericæ. Heath-like. As Spicy-wintergreen, Bearberry, Crowberry.

52. Campanulaceæ. Bellflower-like, As Cardinal-flower.

53. Cichoraceæ. (Compound.) Endive-like. As Lettuce, Dandelion, Hawkweed.

54. Cinarocephalæ. (Compound.) Bearing head-form flowers. As Burdock, Thistle, Bluebottle.

55. Corymbiferæ. (Compound.) Corymb-bearing. As Yarrow, Wormwood, Fleabane.

56. Dipsaceæ. Teazel-like. As Valerian.

57. Rubiaceæ. Madder-like. As Button-bush, Bed-straw, Partridge-berry.

58. Caprifolia. Honeysuckle-like. As Dogwood, Elder, Snow-ball.

NATURAL ORDERS OF JUSSIEU.

59. Araliæ. Spikenard-like. As Ginseng.
60. Umbelliferæ. Bearing umbels. As Fennel, Angelica, Carrot, Celery.
61. Ranunculaceæ. Crowfoot-like. As Windflower, Larkspur, Virgin's bower.
62. Paperaceæ. Poppy-like. As Fumitory, Bloodroot, Celandine.
63. Cruciferæ. Bearing cruciform flowers. As Mustard, Watercress, Shepherd-purse.
64. Capparides. Caperbush-like. As Sundew, Parnassus-grass.
65. Sapindi. Soapberry-like. As Heart-seed.
66. Acera. Maple-like. As Horse-chesnut.
67. Malpighiæ. As Mylocarium.
68. Hyperica. John's-wort-like. As Asarum.
69. Guttiferæ. Bearing secreted drops. As the Balsam tree.
70. Aurantia. Orange-like. As the Lime tree.
71. Melia. Beadtree-like. As Mahogany tree.
72. Vites. Grape-like. As American ivy vine.
73. Gerania. Cranebill-like. As Woodsorrel.
74. Malvaceæ. Mallows-like. As Hollyhock, Cotton.
75. Magnoliæ. Magnolia-like. As whitewood, Anice-tree.
76. Annonæ. Papaw-like. As Porcelia.
77. Menisperma. Moonseed-like. As Schisandra, Wendlandia.
78. Berberides. Barberry-like. As Witchhazel, Pappose-root.
79. Tiliaceæ. Basswood-like. As Linden-tree.
80. Cisti. Rockrose-like. As violet.
81. Rutaceæ. Rue-like. As Caltrops.

NATURAL ORDERS OF JUSSIEU.

82. Caryophylleæ. Pink-like. As Cockle, Flax, Catchfly, Sandwort.
83. Semperviva. Liveforever-like. As Stonecrop, Virginian orpine.
84. Saxifraga. Saxifrage-like. As Allumroot, Tiarella.
85. Cacti. Pricklypear-like. As Currant.
86. Portulaceæ. Purslane-like. As Knawel, Claytonia.
87. Ficoidea. Fig-like As Sesuvium.
88. Onagræ. As Enchanter's Nightshade, Willowherb.
89. Myrtus. Myrtle-like. As Mock-orange, Pomegranite.
90. Melastomæ. As Deergrass.
91. Salicariæ. As grass-poly, Isnardia, Glaux.
92. Rosaceæ. Rose-like. As Thorn, Plumb, Pear, Strawberry.
93. Leguminosa. Bearing Legumes. As Pea, Clover, Locust-tree.
95. Terebinthi. Terpentine-like. As Walnut, Sumach.
95. Rhamni. Buckthorn-like. As New-Jersey-tea.
96. Euphorbia. Spurge-like. As Box, Palmichristi.
97. Cucurbitaceæ. Pumpkin-like. As Melon, Balsam-Apple.
98. Urticæ. Nettle-like. As Hemp, Hop, Mulberry-tree.
99. Amentaceæ. Bearing pendant aments. As Oak, Willow, Beach.
100. Coniferæ. Bearing strobiles, or cones. As Pine, Juniper, Cedar.

NAVELLED. See umbilicatus.

NAVICULARIS. See boat-form.

NECESSARIA, *polygamia*. The fourth order of the class *syngenesia*. Florets of the disk staminate, of the ray pistillate. The disk florets seem to be perfect at first view; but on a close examination they are found without stigmas. The iva (a salt-marsh plant) is a good example.

NECK. The upper part of the tube of a corol.

NECTARIFEROUS. Bearing nectaries. Producing honey.

NECTARY, *nectarium*. That part of a flower, which secretes honey. It is either a distinct horn, gland, spur, scale, cup, &c. or the claw or some other part of the corol secreting honey. This name is applied to any appendage to the flower, which has no other name.

Nemerosus. Growing naturally in groves, where the under brush are cleared away.

NERVED, *nervosus*. Leaves are nerved, when they have rib-like fibres running from the base towards the apex. In numbering nerves for a specific character, the midrib is counted with the lateral nerves.

NEUTRAL. Having neither stamens nor pistils, consequently barren; as the ray-florets of the Sunflower.

NICKED. See emarginate.

Nidulans. Nesting. When seeds are placed in cotton, &c. as in a nest.

NIGER. Black.

Nigricans. Blackish, sooty.

Nigro-cœrulius. Dark blue.

Nisus formativus. That principle of vital energy, which tends to restore lost or injured parts.

Nitidus. Glossy, glittering.

Niveus. Snow-white.

NODDING. See nutans.

Nodus. See knot.

Nomen, NAME. See generic name and specific name.

NOTCHED. See crenate.

Nubilus. Grey and white, cloudy. Resembling cumulous clouds. See cumulous.

Nucamentum. See Ament.

Nucleus. Nut or Kernel. The inner seed or kernel is properly the nucleus; and its hard shell is the putamen. But the whole including both putamen and nucleus, is the nut, *nux.*

Nudus. See naked.

Nudiusculus. Nakedish.

Nullus. None.

Numerosi. Many. An indefinite number.

Numerus. A determinate number.

NUT, *nux.* See nucleus.

Nutans. Nodding. When above half of whatever it is applied to droops or hangs down. See pendulus.

Nutatio. The various inclinations of the parts arising from the effect of the Sun's rays.

O

Ob, obverse. Reversed or inversed. Often combined with ovate, cordate, &c. as obcordate, inversely heart-form.

OBCONIC. Conic with the points, or apex, downwards.

OBCORDATE. Heartform, with the apex next to the stem, or place of insertion.

OBLIQUE, *obliquus.* A position between horizontal and vertical; or between perpendicular and the plane of the base. It is also applied to leaves, petals, calyxes, &c. which are, as it were, cut

obliquely; or whose bases are shorter on one side than on the other.

Oblong, *oblongus*. Having the length twice or more than that of the breadth, with the opposite sides somewhat parallel.

Oblongiusculus. Somewhat oblong.

Oboval, *obovalis*. If it differs at all from obovate, it must be more nearly oval—having the ends nearer equal in width.

Obovate. Ovate, with the narrowest end towards the stem, or place of insertion.

Obscure. Obscurely.

Obsolete, obsoletely, *obsoletus*, *obsolete*. When teeth, notches, serratures, &c. are obscure and appear as if worn out.

Obtuse. Obtusely.

Obtuse. See obtusus.

Obtuse-acuminatus. Blunt with a small point.

Obtusiusculus. Obtusish.

Obtusus, obtuse. Ending bluntly, or in an apex more or less rounded.

Obversus, *obverse*. See ob.

Obvolute, *obvolutus*. A term in foliation; applied to leaves where two opposite ones are conduplicate, with one edge of each leaf between the edges of the other.

Occlusus. Closed.

Ochrea. A roll, or cylindric sheath, around the base of the peduncle in some species of cyperus.

Octandria. (*Octo*, eight; *andra*, male.) Eight-stamened. The name of the eighth class. It comprises all plants whose flowers are perfect, with eight stamens in each, not growing on the pistil nor united by their filaments in one or two sets.

It is also the name of the eighth order in those classes, where the characters of the first thirteen

classes are taken for orders. As *polygala* in the class *Diadelphia*.

OCTANDROUS. Belonging to, or varying into, the class *octandria*.

Octofidus. Eight-cleft.

OCTOGYNIA (*Octo*, eight; *gune*, female.) Eight-styled. The name of the eighth order in each of the first thirteen classes. It comprises all plants in each class respectively, whose flowers have 8 styles in each; or if the styles are wanting, 8 sessile stigmas. But there are no plants of this order yet discovered.

Octolocularis. 8-celled.

Octopetalus. 8-petalled,

Octophpllus. 8-leaved.

Odoratus. Scented, odorous.

Officinalis. Such plants as are sold in the shops for some use, either in medicine or the arts.

One-sided. Flowers, &c. on one side of a stem, &c.

OPAQUE, *opacus*. Neither transparent nor shining.

Operculatus. Having a lid.

Operculum. The lid or covering on the capsules of mosses. This is generally covered by the calyptre when young. After the calyptre is gone and the seeds are ripe, the lid falls also. This term is also applied to the covering of other capsules, resembling the lids of mosses.

OPPOSITE, *oppositus*. Standing at the same height with base against base, on different sides of a stem.

Opposite. Oppositely.

Oppositifolius. Set opposite to the base of a leaf; as some peduncles and stipules are placed.

Opposite-pinnatus. Leafets of a pinnate leaf set opposite to each other.

Orbicularis. Nearly circular.

Orbillæ. See orb.

ORBS. That kind of receptacle of lichens, which is flat, orbicular and dilated, of the substance of the frond, terminal, peltate, without a border, but often surrounded with radiating shoots. The membrane, or disk, under which the seeds are lodged, is smooth, nearly of the colour of the frond. Spurious orbs bordered like shields or spangles when young, are sometimes found in the genus *cornicularia*. Smith.

ORCHIDEOUS COROL. Like the orchis; having 4 arched petals, and the fifth longer.

ORGYA. Fathom. See measures.

ORIFICE. Any hole or opening into a capsule, corol, &c.

Os. See faux.

OVAL, *ovalis.* The length exceeding the breadth in any proportion, with the two ends of an equal breadth, curvature and form, or nearly so; the sides curving from end to end.

OVATE. Egg-form. The length exceeding the breadth in any proportion, one end exceeding the other in breath; the sides curving from end to end.

P

Pagina. The surface of a leaf. The Upper surface is *pagina superior;* the lower surface, *pagina inferior.*

PALATE. A prominence, process or elevation in the lower lip of a labiate corol, which tends more or less to close the throat.

Palea. See chaff.

PALEACEOUS. See chaffy.

PALMATE, *palmatus.* Divided deeply and spreading, so as to resemble the hand with spread fingers.

When the divisions are very narrow and almost down to the stem of a leaf, it is called *pedate*, from its supposed resemblance to a bird's foot. Some pedate leaves are hardly connected at all at the base, and almost run into the compound *digitate* leaf.

Palustris. Growing naturally in swamps and marshes.

Panduræformis. Guitar-form, or fiddle-form. Oblong, broadish near the base and contracted near the sides.

PANICLE, *panicula.* When the peduncles, along the sides of the main peduncle of a raceme, are divided, it takes the name of panicle; as oats. But if it is still in a close, compact form, it is called a *thyrse*, as the lilac.

PANICLED, *paniculatus.* Disposed in the form of a panicle; or bearing panicles.

PAPILIONACEOUS. (*Papillio*, a butterfly.) Butterfly-form; as the pea-flower. When complete, it consists of the *banner*, the upper petal which generally spreads over or above the others; the *wings*, the two side petals, next below the banner; the *keel*, the lower boat-form petal, generally enclosing the stamens and pistil. It is sometimes called the *pea-bloom* flower.

PAPILLOSE, *papillosus.* (*Papilla*, a nipple.) Covered with fleshy points or protuberances. See verrucose.

PAPPOSE, *papposus.* Bearing pappus or aigrette.

Pappus. See aigrette.

PAPULOSE, *papulosus.* (*Papula*, a pimple.) Pimply, bladdery or blistered.

PARABOLIC. Conic, with the top rounded off, considerably below where it would terminate in the apex, if completed in the conic form.

PARALLEL, *parallellus.* Two lines or opposite sides, running nearly equal distances from each other.

The opposite edges of a leaf are parallel when the leaf is linear.

PARASITIC. Drawing support from another plant. Growing out of another; as the dodder.

Parenchyma. A succulent vegetable pubescence; as the thick part of leaves between the opposite cuticles, the substance around the pith of herbs, the pulpy part of apples, &c.

Partes primariæ. The three primary parts of a vegetable are: 1. The *root*, or descending part. 2. The *herbage*, or ascending part, except; 3. The *fructification*, comprising the flower and fruit.

PARTIAL, *partialis.* Particular, not general. Applying to an entire part of a general whole. The perianth, involucre, petiole, &c. of one floret, or of a separate part of all the florets, which with others constitute a compound or aggregate. The perianth, involucre, &c. to the whole is called general or *universal.*

PARTIBLE, *partibilis.* Easily separating into parts. Bipartible, into 2 parts. Tripartible, into 3 parts, &c.

PARTITION. The membrane, &c. which divides pericarps into cells. It is *parallel*, when it unites with the valves, where they unite with each other. It is *contrary* or *transverse*, when it meets a valve in the middle, or in any part not at its suture, or juncture with another.

PARTED, *partitus.* Deeply divided, almost to the base.

Patellulæ. See spangles.

Patens. Spreading so as to form a moderately acute angle; considerably less than a right one, or a square.

Patentissimus. Spreading almost to a right angle.

Patulus. Somewhat spreading. Open, loose.
Pauci. Few in number.
Pauciflorus and *paucifolius.* Few-flowered and few-leaved.
PEA-BLOOM. See papilionaceous.
PECTINATE, *pectinatus.* So finely pinnate or pinnatifid as to resemble the teeth of a comb.
Pedalis. About a foot high.
PEDATE, *pedatus.* See palmate.
PEDATIFID, *pedatifidus.* Nearly the same as pedate; perhaps hardly so deep-cut.
PEDICEL, *pedicellus.* A partial peduncle.
PEDICELLED, *pedicellatus.* Having a pedicel.
PEDUNCLE. See pedunculus.
PEDUNCLED, *pedunculatus.* Having a peduncle.
Peduncularis. Appertaining to, or fixed on, a peduncle.
Pedunculus, PEDUNCLE. The stem bearing the flower and fruit, which does not spring naked from the root. Those which spring immediately from the root without leaves, are called *scape.* As the dandelion has a *scape,* the apple a *peduncle.*
PELLICLE, *pellicula.* A thin membrane-like substance. The close covering of some seeds; sometimes it is a little mucilaginous or downy.
Peltæ. See targets.
PELTATE, *peltatus.* Having the petiole attached to the under side of the leaf. In all cases of leaves and flat stigmas, when the petiole or style is attached to the disk instead of the margin, they are peltate; as the leaf of nasturtion and the stigma of the yellow water lily.
PENDANT. Hanging down.
PENDULOUS. When the whole of the part droops, or hangs down.
PENCIL-FORM, *pencilformis.* Shaped like a painter's pencil, or little round paint-brush.

Pentacoccus. A 5-grained capsule.

PENTAGONAL, *pentagonus.* Five-cornered.

PENTAGYNIA. (*Pente*, five; *gune*, female.) Five-styled. The name of the sixth order in each of the first thirteen classes. Plants of either of these classes with five style or sessile stigmas are of the fifth order of such class. As *Spikenard* and *Flax* of the 5th class, *Woodsorrel* and *Cockle* of the 10th class, *Apple* of the 12th class, *Columbine* of the 13th class.

PENTANDRIA. (*Penta*, five; *andra*, male.) Five-stamened. The name of the fifth class. It comprises all plants, whose flowers are perfect and do not grow on the pistil, and have five stamens to each flower.

Pentandrous. Belonging to, or varying into, the class *pentandria.*

Pentapetalus. 5-petaled.

Pentaphyllus. 5-leaved.

PERENNIAL, *perennis.* Continuing more than two years.

Perexilis. Slender.

PERFECT FLOWER. Having both stamens and pistils.

PERFOLIATE, *perfoliatus.* Perforating a leaf. Having the stem running through the leaf. But the leaf is not formed by the union of opposite bases, as in the *boneset* (eupatorum); for in this case the leaves are connate.

Perfoliate is sometimes the specific name where the leaves are nearly connate (as eupatorium perfoliatum); and even where the leaves are merely clasping (as companula perfoliata.)

PERFORATED, *perforatus.* Having holes as if pricked through. Punctate may differ in presenting spots like points, which are not holes. Pertuse perhaps is synonymous with perforated. These dots may

be seen by holding St. John's wort and many other leaves to the light. This term is applied to stigmas, drupes, &c.

PERIANTH, *perianthum.* (*Peri*, about; *anthos*, flower.) That kind of calyx, which is immediately adjoining the corol, stigmas and pistil, or to such of these organs as are present. It is *superior* when it grows on the germ; it is *inferior*, when it grows out from below the germ. See monophyllus and polyphyllus.

PERICARP, *pericarpium.* (*Peri*, about, *kapos*, fruit.) Seed-case. Any bag, shell, pod, pulp, berry or other substance, enclosing the seed.

PERICHETH, *perichætium.* (*Peri*, about; *chaite*, crest.) An involucre surrounding the base of the peduncle of mosses, among the leafets but differing from them in form. See calyptra.

Peridium. A round membranous dry case, enclosing the seeds in some angiocarp fungusses.

Perigrinus. Foreign, exotic, strange.

Peristomium. The fringe, teeth, or membrane, around the mouth of the capsules of mosses, under the lid.

PERMANENT. Any part of a plant is permanent, which remains longer compared with other parts of the same plant, than is usual for similar parts in most plants. As the calyx of the quince remains on the end of the fruit, till it ripens.

Perpusillum. Very little.

Persistens. See permanent and ring.

PERSONATE, *personatus.* See labiate.

PERTUSE, *pertusus.* Punched. See perforated.

PETAL, *petalum.* The coloured leaf or leaves of the corol. The petal of a monopetalous corol is divided into the *tube* and *limb*; which see. Each petal of a polypetalous corol is divided into the *claw* and *lamina*; which see.

PETAL-FORM, *petaliformis.* Resembling a petal.

Petalinus. Attached to, or being part of, a petal.

Petaloides. Having petals.

PETIOLE, *petiolus.* The footstalk of a leaf. Leaves which have no footstems are *sessile.*

PETIOLED, *petiolatus.* Having a petiole.

Petiolulus. A partial petiole, which connects the leafet to the main petiole; as the butternut.

PHANEROGAMOUS, PHŒNOGAMOUS. Having the stamens and pistils sufficiently apparent for classification. Applied to all plants, not included in the class cryptogamia. M'Bride.

Though *phanerogamous* is correctly derived from *phaneroo,* to make manifest; yet as *phenogamous* (of *phaino,* to shew) is perfectly appropriate, there seems to be no necessity for encumbering the language of botany with another term of greater length. Ives.

Phœniceus. Purple, dark-red.

PHYTOLOGY. (*Phute,* a plant; *logos,* a treatise or discourse.) The science which treats of the principles of vegetables. It is nearly synonymous with the *physiology* of *vegetables.*

Piceus. Blueish-black, resembling dark pitch.

Pileus. The hat of a fungus. The top and most spreading part. It may be without stype, and thus constitute the whole ascending part. It always contains the seeds, though it requires the highest magnifiers to discover them in most cases.

Pilidia. See puffs.

PILOSE, *pilosus.* Hairy. Having distinct straitish hairs. Pappus is pilose, hairy or simple, when each hair is without any lateral branches. See aigrette.

Pilus. A hair. An excretory duct of a bristly form, leading off a fluid. See sting.

PIMPLED. See papulose.

Pinna. A wing-feather. It is applied to leafets, which resemble feathers by their positions.

PINNATE, *pinnatus.* Winged, or feathered. Leaves are pinnate, when distinct leafets are arranged along opposite sides of a simple petiole. See bipinnate and tripinnate.

PINNATIFID, *pinnatifidus.* Cut-winged. Leaves are pinnatifid, when, instead of leafets as in pinnate leaves, segments or divisions of a leaf are along opposite sides of the midrib. Pinnate are compound, but pinnatifid are simple; because the divisions never reach the midrib. When pinnatifid leafets are on a pinnate leaf, it is called *pinnate-pinnatifid.*

PISTILLATE FLOWER. Having pistils only, without stamens; as the flower of the fertile cucumber.

PISTIL, *pistillum.* The central organ of a perfect flower. It generally consists of the germen, style and stigma. But the style is frequently wanting; then the stigma is seated on the germ, or sessile. The stigma receives pollen from the anther, and, in some manner not yet discovered, fertilizes the germ. Without this operation no perfect seeds are produced. See flower, style and stigma.

Pistilliferus. See pistillate.

PITCHER-FORM. See urceolate.

PITH. The spongy substance in the center of the stems and roots of most plants. Most woody stems have no appearance of a pith after they become old.

PITS (cyphellæ.) That kind of receptacle of lichens, which consists of open, cup-like, naked, white or yellow little spots, on the under side of the frond; which is generally downy. They are at first im-

mersed, globose, minute dots, which at length burst with an irregular margin, and discharge a powder.

PITTED. See lacunose.

Placenta. See receptacle.

PLACENTATION. The disposition of the cotyledons in the germination of the seeds.

PLAITED. Folded somewhat like a fan, when nearly full spread. In foliation it is more closely folded.

PLANE. Flat, with an even surface.

PLANT. Any substance growing from seed. As trees, grass, puffball, mould. See vegetable.

Plenus-flos. See full-flowered.

Plicatus. See plaited.

PLUMOSE. Feather-like.

PLUMOSE *pappus.* Feather-like down. When a hair has other hairs arranged on opposite sides of it.

Plumula. The ascending part of a plant at its first germination.

Plurimus. Very many.

POD. That kind of pericarp which is composed of two valves with the seeds attached to one or both sutures, or a longitudinal partition at the edges immediately adjoining the sutures. The pod is either a legume or silique.

PEDETIA. The peduncles of lichens, whether hollow or solid.

POINTAL. See pistil.

POISONS. The definition of poisons and the manner of their operation has not yet been satisfactorily made out. It will here be no farther noticed, than as it respects vegetables, and then not physiologically.

POISONOUS VEGETABLES. Persons of all descriptions have frequent occasion to make some use of plants, when they are not in a situation minutely to investigate their nature and qualities. As many plants

are narcotic and injurious to the human constitution; it is very convenient to have at hand, or in the memory, a few concise rules on this subject. The following have been selected with great care from the authors whose names are given at the end of each rule.

GENERAL RULES FOR AVOIDING POISONS.

Plants not poisonous.

1. Plants with a *glume* calyx, never poisonous. As Wheat, Indian-corn, Foxtail-grass, Sedge-grass, Oats. Linneus.

2. Plants whose stamens *stand on the calyx*, never poisonous. As Currant, Apple, Peach, Strawberry, Thorn. Smith, page 392.

3. Plants with *cruciform* flowers, rarely if ever poisonous. As Mustard, Cabbage, Watercress, Turnip. Smith, page 487.

4. Plants with *papilionaceous* flowers rarely, if ever, poisonous. As Pea, Bean, Locust-tree, Wild-indigo, Clover. Smith, page 446.

5. Plants with *labiate* corols bearing seeds without pericarps, never poisonous. As Catmint, Hyssop, Mint, Motherwort, Marjoram. Smith, page 434.

6. Plants with *compound* flowers rarely poisonous. As Sunflower, Dandelion, Lettuce, Burdock. Milne.

Poisonous plants.

1. Plants with 5 stamens and one pistil, with a dull-coloured *lurid* corol and of a nauseous sickly smell, always poisonous. As Tobacco, Thorn-apple, Henbane, Nightshade. The degree of poison is diminished where the flower is brighter coloured and the smell is less nauseous. As potatoes are less poisonous, though of the same genera with nightshade. Smith, page 415.

2. *Umbelliferous plants* of the aquatic kind and a nauseous scent are always poisonous. As Water-hemlock, Cow-parsley. But if the smell is pleasant and they grow in dry land, they are not poisonous. As Fennel, Dill, Coriander, Sweet-cicily. Smith, page 416.

3. Plants with *labiate* corols, and seeds in capsules, frequently poisonous. As Snap-dragon, Fox-glove.

4. Plants from which issue a *milky juice* on being broken are poisonous, unless they bear compound flowers. As Milkweed, Dogbane. Milne's Contortæ and Lactescentia.

5. Plants having any *appendage* to the calyx or corol, and eight or more stamens, generally poisonous. As Columbine, Nasturtion. Linneus.

General rule.

Plants with few stamens, not frequently poisonous, except the number be five; but if the number be 12 or more, and the smell nauseous, heavy and sickly, the plants are generally poisonous. Milne's Multisiliquæ and Sapor.

Note. Many plants possess some degree of the narcotic principle, which are still by no means hurtful. But the use of such plants is to be deferred, till fully investigated. See qualities.

POLLEN. Meal. The dusty or mealy substance contained in the cells of anthers. In the anthers of most of the plants in the gynandria class, the pollen is glutinous. And even the dry pollen is always moistened by a peculiar liquid on the stigma, before it fertilizes the germ. These dry globules always explode on touching the moist stigma. On being viewed through a magnifier, they are found of various forms. In the sunflower it is a prickly ball, in geranium perforated, in comfrey double,

in mallows a toothed wheel, in violet angular, in daffodil kidney-form, &c.

POLYADELPHIA, (*Polus* many; *adelphos*, a brother.) Many brotherhoods. The name of the eighteenth class as first established by Linneus. This class includes all plants with perfect flowers, whose stamens are united by their filaments in three or more sets, or brotherhoods. As St. John's wort, Orange, St. Peter's wort. This class is still retained by the translators of Linneus, Wildenow and others. But it is rejected by Persoon and others, on account of the extreme uncertainty in its character. Very few species of the genera arranged under it are constant in its character. Of the late American writers, Mulenberg, Bigelow, Elliot, and Doct. Barton, have retained it; Pursh and the author of the American Genera have rejected it.

POLYADELPHOUS. Belonging to, or varying into, the class polyadelphia.

POLYANDRIA. (*Polus*, many; *audra*, male.) Many stamened. The name of the thirteenth class. It comprises all plants, whose flowers are perfect, with twenty or more stamens in each, growing to the receptacle. It is distinguished from the 11th class by having more stamens, and from the 12th by their not growing to the calyx.

It is also the name of the *thirteenth order* in those classes, where the characters of the first thirteen classes are taken for orders. But the character of the 18th class is not rigidly adhered to in this order. If the number of stamens exceed ten the plant is placed in this order. And those which are very variable in number are generally placed in it; as the Arum has sometimes 6 or 8 stamens. Some of the examples of this order are Mallows and Hollyhock in the class *monadelphia*, Indian

turnip, Oak, Chesnut, Buttonwood in the class *monœcia*, Poplar in the class *diœcia*.

POLYANDROUS. Belonging to, or varying into, the class *polyandria*.

POLYCOTYLEDONOUS. Plants with more than two cotyledons. See cotyledon.

POLYGAMIA. (*Polus*, many; *gamia* marriage.) Many unions. The name of the twenty third class, as established by Linneus. It comprises all plants, which have some perfect flowers, and others which are staminate and pistillate, or both kinds. This class is divided into three orders. 1. *Monœcia*, having perfect flowers and either staminate or pistillate ones or both on the same plants. 2. *Diœcia*, having perfect flowers on some plants, and either staminate or pistillate flowers on others of the same species. 3. *Triœcia*, having perfect flowers on some plants, staminate on others, and pistillate on others of the same species. This class, like the 18th, is abolished by Persoon and others, and the plants under it distributed among the other classes. President Smith thinks it ought to be discarded. See page 485.

POLYGAMOUS. Varying into, or inclining to, the class *polygamia*.

Polygonus. Many cornered, or many-angled.

POLYGYNIA. (*Polus*, many; *gune*, female.) Many-styled. The name of the thirteenth order in each of the first thirteen classes. Plants of either of these classes with any number of styles or sessile stigmas over 12, are of the 13th order of that class. But we have no writer on North American plants, who has adopted the order *Dodecagynia*; therefore we may here take this order for all plants in the first 13 classes, whose flowers contain over 10 styles or sessile stigmas. Examples. Yellow-root

in the class *pentandria*, Waterplantain in the class *hexandria*, Strawberry in the class *icosandria*, Crowfoot in the class *polyandria*.

POLYPETALOUS. Many-petalled. If the corol consists of more than one petal, it is polypetalous.

POLYPHYLLOUS. Many-leaved. A calyx of more than one distinct piece is polyphyllous.

Polyprenus. Enclosing more than one nut, or stone.

Polysperma. Many-seeded.

Polystachus. Many-spiked.

POME, *pomus.* A pulpy pericarp without valves, which contains within it a capsule. See *berry* and note the difference. Apples, quinces, &c. are pomes.

Pomiferus. Bearing pomes.

POROUS, *porosus.* Full of holes, cellules, or tubular openings.

Præcox. Rare-ripe. Coming to maturity early in the season.

Præmorsus. Bitten off. Terminating bluntly, as if bitten off. As the root of the pedate or birdfoot violet.

Prasinus. Green like a leek.

Pratensis. Growing naturally in meadow land.

Premens. Pressing.

PRICKLE. A sharp process fixed to the bark only, not to the wood; as on the Raspberry, Rose, Barberry.

PRISMATIC, *prismaticus.* Linear, with several flattish sides.

Proboscides. Proboscis-like. Resembling a projecting horn.

Procersus. Tall, elevated.

PROCUMBENT, *procambens.* Lying on the ground.

Profunde. Deeply.

PROLIFEROUS, *prolifer.* Putting forth branches or flowers from the center of the top of a preceding one.

PROMINENT, *prominens.* Standing out more or less beyond what is usual in other plants.

Prominulus. A little prominent.

Pronus. The under side.

PROP. See fulcrum.

PROPAGATION. See flower.

Propago. See gemmatio.

Propagula. See efflorescence.

Propendens. Apparently on the point of falling.

PROPER, *properus.* See partial.

PROSTRATE, *prostratus.* See *procumbent* and *humifuse.*

PROTRUDED. See exsert.

Proximus. Very near.

Pruina. The mealiness or hoariness on plumbs, peaches, &c.

Pruriens. Hairs which excite itching.

PUBESCENT *pubescens.* Hairy, having hairs, wool, down, glandular hairs, &c.

PUFFS, (pilidia.) That kind of receptacle of lichens, which consists of little round bordered knobs, whose disk finally turns to powder. It is at first covered with a membrane and often clothed with a fine grey hoariness. These receptacles are elongated below into a stalk fixed to the crust, but totally different from it.

PULLUS. Dull brownish colour.

PULPY, *pulposus.* Filled with a tenaceous kind of parenchyma.

PULVERULENT, *pulverulentus.* Turning to dust.

Pulvinuli, (A garden bed.) Excrescences found on the surface of the fronds of some lichens, sometimes clustered or branched. Its use is unknown

Pumilus. Small, low.
PUNCHED. See perforated.
PUNCTATE. Dotted or sprinkled with coloured, generally diaphanous, specks. See perforated.
PUNGENT, *pungens.* Sharp, piercing, pricking.
Puniceus. Scarlet-coloured.
Purpurascens. Inclining to a purple colour.
Purpureus. Purple.
Pusillus. Low, small, diminutive.
PUTAMEN. Nut-shell. See nucleus.
Pyramidalis. Conic, pyramid-form.

Q

QUADRANGULAR, *quadrangularis.* Having four corners, or angles.
QUADRICAPSULAR. Having 4 capsules.
Quadridentatus. Four-toothed.
Quadrifarius. Facing 4 ways.
QUADRIFID, *quadrifidus.* Four-cleft.
Quadriflorus. Four-flowered.
Quadrijugus. Four-paired.
Quadrilobus. Four-lobed.
Quadrilocularis. Four-celled.
Quadrinervis, Four-nerved.
Quadripartitus. Four-parted.
Quadrivalvis. Four-valved.
Quadrivascularis. Four cup-form cells.
QUALITIES OF PLANTS. Richard says that plants of the same taste and odour, are generally possessed of similar qualities. Also that the smell and taste are always the same. He divides the odours of plants into, 1. *Fragrant.* 2. *Aromatic.* 3. *Ambrosiac* (resembling amber.) 4. *Alliaceous* (resembling garlic.) 5. *Fetid* (as asafœtida, &c.) 6. *Nau-*

ceous (causing the stomach to heave.) As the fragrant, the aromatic and ambrosiac, are always free from all hurtful qualities, and as the fetid and nauseous are generally poisonous; it seems that mankind have in some measure an instinctive principle by which food is to be selected.

Quaternus. Four together in a whorl.

Quinus. Five together in a whorl.

QUINATE, *quinatus.* Five leafets on one petiole.

Quinquangularis. Five-cornered. When a leaf has five points; as the cucumber.

Quinquecapsularis. Having 5 capsules.

Quinquefidus. Five-cleft.

Quinqueflorus. Five-flowered.

Quinquejugus. Five-paired.

Quinquelobus. Five-lobed.

Quinquelocularis. Five-celled.

Quinquenervis. Five-nerved.

Quinquepartitus. Five-parted.

Qninquevalvis. Five-valved.

Quinquevascularis. Five cup-form cells.

R

RACEME, *racemus.* (*Rax*, a bunch of grapes.) That kind of inflorescence, wherein the florets have undivided pedicels arranged along the sides of a general peduncle. As currants, grapes.

RACEMED, *racemosus.* Flowers in racemes.

RACHIS, (*Rachis*, the back-bone.) The filiform receptacle connecting the florets in a spike. As in wheat-heads. It is sometimes put for the midrib in ferns.

RADIATE, *radiatus.* The spreading florets around

the margin of a compound flower. As the Sunflower. See Compound.

RADICAL, *radicalis*. Proceeding from the root without the intervention of a stalk. As the leaves of plantain.

RADICANS. See rooting.

Radicatus. Sending off roots.

RADICLE, *radicula*. The little fibrous branches proceeding from the main root; which imbibe the moisture and other nourishment for the plant.

Radius. See ray.

Radix. See root.

RAGGED. See Squarrose.

Ramentum. Applied to the loose scales frequently in the angles of petioles. &c. called in English, *raments*.

Rameum folium. See branch leaves.

Ramiferus. Producing branches.

Ramosissimus. Very branching.

Ramosus, RAMOSE. branching.

Ramulus. See branchlet.

Ramus. See branch.

Rariflorus. Flowers few and distant.

Rarifolius. Leaves few and distant.

RAY. The outer margin or circumference of a compound flower. It is also applied to the outer florets of an umbel; particularly when they differ in any respect from the inner, or disk, florets.

RAYED. having a ray.

RECEPTACLE. *receptaculum*. The base by which the other parts of the fructification are connected and supported; being the end, or at the end, of the peduncle. It is considerably used in the generic characters of compound flowers; but very little noticed in any others. Perhaps this part may hereafter be noticed on account of the change, it

in some way produces on the vegetable secretions. Doct. Smith mentions the wholesomeness of some fruits, while the other parts of the plant are poisonous. See page 392. Every one has noticed the delicate flavour of the pond-lily, (Nymphea odorata) while all back of the receptacle is extremely different. Numerous similar instances may be cited to prove the very great change in some way effected by the receptacle.

RECLINED, *reclinatus*. Bent down so that the apex of a leaf, &c. is lower than the base. Applied to the stem it implies that it is bowed towards the earth.

Recompositus. Twice compound.

Reconditus. Concealed.

Rectiusculus. Straitish.

Rectus. Strait.

RECURVED, *recurvatus*. Curved downwards.

Recutitus. Appears as if peeled.

REFLEXED, *reflexus*. Bent back, nearly or quite to touch the stem or peduncle.

REFRACTED, *refractus*. Bent back in an angular form, so as to appear as if broken.

Regnum vegetabile. The *vegetable kingdom* as taken into view with the *animal* and *mineral*.

REGULAR, regularis. See equal.

RELATIVE PROPORTIONS. When dimensions are expressed indefinitely, as long, very long, short, large, &c. such expressions are to be understood as long, &c. compared with the proportion which similar parts usually bear to other parts, in plants generally. But when such terms are used for specific names, the proportion between the parts of species of the same genus, which were known when the names were given, are compared. Thus *Kalmia latifolia* has a broader leaf than *Kalmia an-*

gustifolia; but it has a narrow leaf compared with any species of *trillium.*

REMOTE, *remotus.* See relative proportion.

RENIFORM. See kidney-form.

REPAND, *repandus.* Having small sinuses, separated by teeth in the form of segments of small circles.

Repens. See creeping.

Reptans. See creeping and runner.

Restans. See permanent.

Resupinatus. Upside down.

RETICULATE. Netted. Having veins crossing each other like net-work.

RETIFORM. Net-form, net-like.

RETROFLEX, *retroflexus.* Bending in various directions.

Retrofractus. See refracted.

Retrorso-dentatus. See runcinate.

RETUSE, *retusus.* Ending in a sinus generally hollowed out but very little. See emarginate.

REVERSED. Bent back towards the base.

REVOLUTE, *revolutus.* Rolled outwards. A term in foliation; applied to leaves whose opposite margins are rolled outwards and continued rolling, till the two rolls meet on the back of the midrib and parallel to it. It is the reverse of *involute.*

Rhizosperma. Fruit on the root of some ferns.

RHOMBIC, *rhombeus.* See deltoid.

Rhomboideus. See deltoid.

RIB. A nerve-like support to a leaf.

RIBBED. When the midrib sends off lateral ribs nearly strait to the margin. It is sometimes put for *nerved.*

Rictus. See gape.

RIGID, *rigidus.* Stiff, inflexible, or not pliable; or if attempted to be bent, will rather break.

Rimose, *rimosus.* Chincked, abounding in cracks, as the outer surface of the pitch-pine tree.

Ring. The band around the capsules of ferns, which is elastic. See exanulatus.

It is also the thin membrane attached to the stem of a fungus. When young it is attached to the pileus. It is *erect* when the upper edge is not fastened—*inverse* when the lower edge is not fastened—*sessile*, when it is attached by one side only —*mobile*, when it may be pushed up and down—*persistent*, when it is as durable as the pileus—*fugacious*, when it disappears at the opening of the fungus.

Ringent, *ringens.* See labiate.

Rising. See assurgens.

Root. The descending part of a vegetable, which enters the earth, or other substance, in search of nourishment for the plant. Roots are *annual*, *biennial*, or *perennial.* See ages. They are Branching, Fibrous, Creeping, Spindle-form, Tuberous, Bulbous, or Granulated. See each term in its place.

Rooting. Bending or extending to the earth and striking root.

Root-leaf. See radical.

Rootlet. A fibre of a root.

Roridus. Humid. Appearing as if covered with dew.

Rosaceous. A corol formed of roundish spreading petals, without claws or with extremely short ones.

Roseus. Rose-coloured.

Rostel, *rostellum.* That pointed part, which tends downwards at the first germination of the seed. See corcle.

Rostratus. See beaked.

Rotate, *rotatus.* See wheel-form.

Rotundus. Roundish. Without angles.

Rough. Covered with dots, which are harsh to the touch, but not apparent to the naked eye. See rugged.

Round. See rotundus.

Rubra. Red.

Rubiginosus. Rust-coloured.

Ruderalis. Growing among rubbish about buildings, &c.

Rugged. Covered with invisible dots, which are harsh to the touch. See rough.

Rugose. Wrinkled. Veins more contracted than the disk, so that the intermediate pyrenchyma rises up between them.

Runcinate. Pinnatifid, with the divisions pointing backwards; as the Dandelion.

Runner. A shoot producing roots and leaves at the end only, and from that place giving rise to another plant.

Rupestris. Growing naturally among rocks.

S

Sabre-form. See acinaciform.

Sagittate, *sagittatus.* See arrow-form.

Salsus. Salt-tasted.

Salver-form. A monopetalous corol with a flat spreading limb proceeding from the top of a tube.

Samara. A winged pericarp not opening by valves; as the Maple.

Sap. The watery fluid contained in the tubes, and cellules of vegetables; which furnishes the means of, or is itself, the support of their growth and life, and preservation from decay. That part of the sap, which supplies materials for the growth, foliage and fructification, evidently ascends by way

of the *camb*. See camb. But that, which fills the interstices among the woody fibres, and serves to preserve them from decay, is probably raised by capillary attraction. Freezing and thawing in some way or other suspends for a day or two the effect of capillary attraction. It then descends by its natural gravity; at which season only can the sap be obtained from the sugar maple. That it descends is evident from the fact, that no sap is obtained from below the incission, except a few drops at the first moment after it is made. That the sap descends from the woody fibres and not from the camb appears from inspection. That this sap serves only to preserve the wood appears from the rapid decay of the wood in the sagar maple directly above the incission to the whole extent of the bole; while the incision produces but little effect below it. And the herbage of the tree with the outer layers of wood continue as flourishing after the tree has been drained of its sap annually for half a century, as its neighbours, which have never lost any sap. It may be observed further; that sap can never be drawn from the same vessels above the incision where it has been drawn on any preceding year; unless a new incission be made several feet above the old one. Nor even then if the preceding draining had been very considerable; or, in other words, if the sugar-making season had been very favourable, and the incission large.

Sapindus. Having some kind of taste.

Sapor. Having a relish, pleasant tasted. Any taste. Colour sometimes indicates the taste. White berries are generally sweet; red, sour; blue, sweet and sour; black, insipid and poisonous. Wildenow. But certainly our spicy wintergreens (gaul-

theria,) partridge-berry (mitchella,) and whortleberries (vaccinnium,) are exceptions to Wildenow's rules.

SARMENTOSE, *sarmentosus*. A running shoot, which strikes root at the knots or joints only. Generally applied to shrubs. See runner.

SAUCER-FORM. Shaped like a common tea-saucer.

Scaber, SCABROUS. See rough.

Scabrities. Roughness.

SCALLOPPED. See repand.

SCALY. Covered more or less with scaly appendages, as Fern roots; or consisting of substances, in some measure resembling coarse fish-scales; as the scales of Lily roots.

Scandens. See climbing.

SCAPE, *scapus*. See peduncle.

SCARIOUS, *scariosus*. Dry and membranous, generally transparent.

SCATTERED. Standing without any regular order: that is, neither opposite, alternate, nor in any definable series.

SCION. Shoots proceeding laterally from the roots or bulb of a root.

SCROBICULATE, *scrobiculatus*. Deep round pits on the receptacle gives it this name.

SCORED. See Sulcate.

Scutellæ. See shields.

Scutellatus. See saucer-form.

SCYMITAR-FORM. See acinaciform.

Scyphifer, *Scyphus*. Cup-bearing. See cyathiform.

SECTION. The genera of some orders and the species of some genera are divided into sections. Sections judiciously constructed greatly facilitate the investigations of plants. But they often mislead; and must be sometimes disregarded, and the whole order read over; especially under those orders

which are made up of natural families. See the orders *siliquosa* in the class *Tetradynamia* of Linneus' system.

Secundus. Turned to one side. One-sided, one-ranked.

SEED. The matured part of fructification, destined for the reproduction of the species. It contains the rudiment of a new plant and is analogous to the egg of animals. It consists of the corcle, cotyledons, tegument and hilum; which see.

SEED-BUD. See germen.

SEED-COAT. See aril.

SEED-LEAVES. The cotyledons expanded into leaves.

SEED-LOBES. See cotyledons.

SEED-VESSELS. See pericarp.

SEGMENT. The parts into which a calyx, corol, leaf, &c. is divided or cut.

SEGREGATA *polygamia.* The 5th order of the class *syngenesia.* The florets are all perfect like those of the first order; but it differs from that in having a partial perianth to each floret. In all other plants of this class, the florets are destitute of partial perianths. The *elephant-foot* (elephantopos) is the only native of North America in this order.

Sejugus. Six-paired.

Semen. The seed.

Semiamplexicaulis. Half clasping the stem.

SEMICOLUMNAR. See semiterete.

Semicylindraceus. Half-cylindric. In form of a round ruler split lengthwise.

Semiflosculus, SEMI-FLORET. See ligulate.

Semi-inferus. Half-inferior. When the calyx grows on the side of the germ, so that it is neither superior nor inferior.

Seminalis. See seed-leaves.

Seminatio. The sewing of seeds.

Seminifera. Bearing the seed.

SEMIORBICULAR, *semiorbiculatus.* In form of half a sphere.

Semiquinquefidus. Half 5-cleft.

Semisagittatus. Half-arrowform. That is, one side wanting; as in the *vicia pusilla.*

Semisexfidus. Half 6-cleft.

SEMITERETE, *Semiteres.* Half terete. See terete.

Sempervirens. Living through the winter and retaining the leaves.

Senus. Six-fold. Growing in sixes.

Sensilis, SENSITIVE. Moving on being touched. See irritability.

Sericeus. Silky. Covered with soft close-pressed hairs.

Serotinus. Coming to maturity late in the season.

SERPENTINE MARGIN. See repand.

SERRATE, *serratus.* (*Serra*, a saw.) Having sharp notches, appearing as if cut, about the edge or margin, pointing towards the apex.

SERRULATE, *serrulatus.* When a serrate leaf has the teeth serrate again. It is also applied to any serratures, which are very fine.

Sesquialter. When a large fertile floret is accompanied by a small abortive one.

SESSILE. Sitting down. When a leaf, flower, seed-down, pileus of a fungus, receptacle of a lichen, &c. are destitute of a petiole, peduncle, stipe, &c.

Seta. A bristle.

Setaceus. Bristle-form.

Setosus, SETOSE. Bristly. Having the surface set with bristles, or stiff strait hairs.

Sexangularis. Six-angled.

Sexfidus. Six-cleft.

Sexflorus. Six-flowered.

Sexjugus. Six-paired.

Sexlocularis. Six-celled.

Sexus, SEX. When Linneus first adopted the stamens and pistils as the organs of classification, he addressed his arguments to physicians, who were conversant with animal anatomy. He therefore took advantage of the analogy between animals and vegetables in the reproduction of their kind, in order to illustrate his theory. He called the stamens males, and the pistils females, &c. But nothing can be more ridiculous and disgusting than to keep up these references at this day. Dr. James Edward Smith, President of the Linnean Society at London, has totally discarded all sexual allusions. Under the word Clitoria in Rees' Cyclopedia he has treated the subject with great severity. Dr. Bigelow in his incomparable discription of the plants about Boston, as far as it goes, has no where defiled his work with a single allusion of the kind.

Sexvalvus. Six-valved.

SHAFT. See style.

SHAGGY, See hirsute.

SHARP. Tapering to a point. Acute differs from sharp, as it may apply to the tip of a leaf, which becomes broad immediately back of the point.

SHEATH. The prolongation of a leaf down the stem, which it encloses; as in most culminiferous plants.

SHEATHED. Having a sheath.

SHIELDS, *scutellæ.* That kind of receptacle of lichens, which is open, orbicular, saucer-like. The underside and border are of the substance and colour of the frond. The disk is of a different colour and substance from the border and frond, containing the seeds in extremely minute vertical cells. The shields are thick and tumid, when they are ses-

sile; and membranous when stalked or elevated. Very rarely they are perforated in the center. Smith.

SHINING. See lucidus.

SHOOT. Each tree and shrub sends forth annually a large shoot in the spring, called the *spring shoot;* and from the end of that a smaller one about the 24th of June, called St. John's shoot. There is always the appearance of a joint where the latter springs out, very perceptible after the whole shoot is matured.

SHRIVELLING. See withering.

SHRUB. A vegetable with a woody stem. It is generally put for that kind of woody plant, whose stem divides into branches near the ground, without being elevated by a bole, like trees. See tree and suffrutex.

SHRUBBY. Having woody stems or branches.

Siccus. Dry, neither humid nor succulent.

SICKLE-FORM. A very much-curved keel.

SILICLE, *silicula.* A little siliquae, whose length and breadth are nearly equal.

SILICULOSA. The name of the first order of the class *tetradynamia.* It includes those plants which have a silicle, whose length is never twice that of its breadth. As the Shepherd's purse, Horse-radish, Pepper-grass.

SILIQUE, *siliqua.* That kind of pod, which has a longitudinal partition with the seeds attached to both edges of it alternately. As the radish.

SILIQUOSA. The name of the second order of the class *tetradynamia.* It includes those plants, which have a silique, whose length is more than twice that of its breadth. As Mustard, Cabbage, Watercress.

SILKY. See sericeus.

SIMPLE, *simplex*. Undivided. Single, opposed to compound, or aggregate.

Simplicissimus. Very simple.

SINGLE. Only one. Also opposed to full-flowered.

Sinistrorsum. Twining from right to left, that is, contrary to the apparent motion of the sun; as the pole-bean.

SINUATE, *sinuatus*. (*Sinus*, a bay.) Having rounded incisions. The margin hollowed out, resembling a bay; as the white-oak leaf.

SINUATE-SERRATE. Having serratures hollowed out; as the Chesnut.

SITTING. See sessile.

Situs. Situation; as opposite, alternate, &c.

SLEEK. See glabrous.

SLEEP OF PLANTS. The effect of night upon the external appearance of some plants; as the leaves of Peas closing over the very young flowers.

SLENDER. See tenuis.

Smaragdinus. Grass-green.

SMOOTH. Sometimes put for glabrous, but it is not synonymous. For glabrous means sleek or slippery; whereas smooth may be applied to fine chamois leather.

SOLID, *solidus*. Of an uniform substance, not naturally partible; as the turnip. See coated and scaly.

SOLITARY, *solitarius*. Standing alone, or very distant from others of the same kind.

Solutus. Disengaged. Not adnate.

SOMEWHAT. Used as a diminutive; implying in some degree, not fully. President Smith translates *sub*, by *somewhat*, when combined with an adjective; as *subtrifidus*, somewhat three-cleft.

Somnus plantarum. See sleep of plants.

Sordide albicans. Dirty white.

Sorus and *Soredia*. See fruit-dots.

Spadiceus. Plants with Spadixes.

Spadix. An elongated receptacle proceeding from a spathe, or resembling such in texture and appearance.

Spathe. That kind of calyx, which first encloses the flower and after it expands is left at a distance below it. As Daffodill, Onion, Indian Turnip.

Spatulate, *spatulatus* or *spathulatus*. Roundish and diminishing into a long, narrow, linear base.

Species. The lowest division of vegetables. There have been about thirty thousand species described. In North America about four thousand species have been described; of these about twenty-five hundred are found to the north and northeast of Virginia. About one thousand species have been examined by Professor Ives in a wild state, within five miles of Yale College. Very few places of the same extent will afford more than eight hundred, and few less than six hundred, in the Northern States. Phelps gives a catalogue of thirteen hundred and forty species as a complete list of all the British plants. In all these calculations, relating to America and Great Britain, the cryptogamous plants are left out.

Specific character. See diagnosis and descriptions.

Specific name. In common use we apply this to what Linnæus called the *trivial name.* The specific name he calls all those several descriptive words, which express the essential difference, or diagnosis.

The rage for changing specific names has become a great nuisance to the science. Richard proposes the establishment of a *literary tribunal,* having authority to fix the names in every department of science for the whole globe; in order to check the growth of this child of vanity and ignorance.

Spike, *spica*. Having florets arranged along the sides of a general elongated peduncle or receptacle, without partial peduncles or with extremely short ones. As a Wheat-head, or Mullein.

Spikelet, *spicula*. One of the subdivisions of a spike.

Spindle-form. See fusiform.

Spine, *spina*. See thorn.

Spinescens. Becoming thorny.

Spinose, *spinosus*. Thorny.

Spiral, *spiralis*. Twisted like a screw.

Spongiosus. Spongy.

Sporæ. The seeds of lichens.

Sporangium. A name given to the pericarp by Hedwig.

Sporangidium. Wildenow's name for the columella of mosses. See columella.

Spotted. Having spots differing in colour from the principal part.

Spreading. See patens.

Spur. An elongated process from the base, or from near the base of a calyx or corol or nectary, somewhat resembling a horn or cock's spur. As the Larkspur, Orchis and Nasturtion.

Spurred. Having a spur.

Spurred-rye or spurred-grain. An enlarged, elongated seed, projecting out of a glume, of a black or violet colour, brittle texture, somewhat spur-form. It is that morbid swelling of the seed, called Ergot by the French. The black or dark coloured kind is called the *Malignant ergot*. "Large "doses of which cause head-ache and febrile symptoms. Under proper regulations it may be considered a valuable addition to the present stock "of medicinal agents. The dose usually administered is from ten grains to half a dram, in decoction." Bigelow. The pale violet kind, call-

ed *simple ergot*, is harmless and inactive. Wildenow.

Grain growing in low moist ground, or new land is most subject to it. Also spring grain more than winter grain; and rye more than wheat, barley or oats.

When crops are so much infected with it as greatly to injure them, the loss may be in a great measure made up by collecting the ergot, and selling it to druggists. It should be thoroughly winnowed out of the grain, as it is said to be very injurious in bread. The ergot may then be collected from the chaff.

Squamosus or *squamatus*. See scaly.

SQUARROSE, *squarrosus*. Ragged. When the points of scales, &c. bend outwards, so as to make a ragged appearance. It is also used for scurfy, or when covered with a bran-like scurf.

STALK. See stem.

STAMEN. The part of the fructification next to the central organ. It consists of a knob of one or more cells containing pollen. It is either elevated on a filament; or sessile upon the germ, style, stigma, receptacle, calyx or corol.

STAMINATE. Having stamens only, without a pistil; consequently barren. As the flowers in the tassels of Indian corn.

Stamineus. Having no corol, the stamens serving in its stead. Ray.

Staminiferus. See staminate.

STANDARD. See banner.

STELLATE, *stellatus*. Spreading out in a radiate manner. Leaves are stellate, when three or more surround the stem in a whorl. Flowers and the volva of a fungus are stellate, when the petals or

segments spread out, so as to resemble the vulgar representation of a star.

STEM. The main base or supporter of the fructification and herbage. It is either Tidge, Culm, Scape, Peduncle, Petiole, Frond, or Stipe; which see.

STEM-CLASPING. See clasping.

STEM-LEAF. Inserted on the stem. See cauline.

STEMLESS. Having no stem.

STERILE, *sterilus*. Barren flower. Staminate flower.

STIFF. See Rigid.

STIGMA. The top of the pistil. It is generally moist when in full perfection, for the better reception of the pollen. See pollen. Some care is required in numbering sessile stigmas. No more must be numbered, than can be found distinct quite on the germ.

STINGS, *stimuli*. Hair-like processes, which excite itching punctures; as on the Nettle. They are generally hollow with a sack at the base, containing an acrid liquor. By pushing against their points, the sacks are compressed, and thrust out the liquid.

STIPE, *Stipes*. The lower part of the midrib of a fern; the stem of a fungus; or the stem of the down on the seeds of Dandelion, &c.

STIPED, *stipitatus*. Having a stipe.

STIPULE, *stipula*. A leafet or scale at or near the base of a petiole, which in some respect differs from the leaves.

STIPULAR, *stipularis*. Formed of, or connected with stipules.

STIPULED, *stipulatus*, or *stipulaceous*. Having stipules.

Stolo. See sucker.

Stoloniferus. Putting forth suckers.

STRADDLING. See divaricate.

STRAIGHT, or STRAIT. In a nearly right line.

STRAITISH. A little curving, but not sufficiently to take the appellation of curved.

STRAP-FORM. See ligulate.

Stratum proligerum. The seed-bearing disk of the receptacles of lichens.

STRIATE, STREAKED, *striatus.* Marked or grooved with slender lines.

Strictus. Both stiff and strait, or perfectly strait. See erect.

Strictissimus. Very stiff and strait.

STRIGOSE, *strigosus.* Armed with small, close, rigid bristles, which are thickest below. Wildenow.

Strobilaceus. In form resembling a strobile.

STROBILE, *strobilus.* An ament with woody scales; as the fruit of pine.

Strobiliformis. See strobilaceus.

STYLE, *stylus.* (*Stulos*, a column.) That part of a pistil, which is between the germ and stigma. It is often wanting; as in the Tulip.

There is frequently a difference in opinion among authors in fixing the orders of some plants, on account of their numbering the styles differently. As in the Mountain rice (Oryzopsis.) Richard made it the first order, because the two styles seemed to unite a little above the germ. But Muhlenberg makes it the second order, because they are at least separable, if not always separate in perfect maturity. It grows in abundance about New-Haven, with styles perfectly separate in all stages. From this example the student will perceive the importance of looking through all the orders, where his plant can possibly be found; before he determines in difficult cases.

Suavis. Sweet, agreeable.

Sub. Used in combination as a diminutive. See somewhat.

Suberosus. Corky.

SUBMERSED, *submersus.* Growing under water.

Subterraneus. Growing and flowering under ground. This may be applied to the shoots of the Polygala rubella.

Subtus. Beneath.

SUBULATE, *subulatus.* See awl-form.

Subunifiorus. Generally one flowered, but sometimes more.

Succulentus, SUCCULENT. Juicy, abounding in juice. It is also applied to a pulpy leaf, whether juicy or not.

Succus. See sap.

SUCKER. A shoot from the root, by which the plant may be propagated.

Suffrutex. An under-shrub. A plant whose branches annually die, but the lower part of the stem is woody and remains; as the *Spirea alba,* white Steeple-bush; also Sage.

SUFFRUTICOSUS. Undershrubby.

SULCATE, *sulcatus.* Furrowed. Marked with deep lines.

Sulphureus. Sulphur-coloured.

Superans. Exceeding in height.

SUPERDECOMPOUND. See supradecompositus.

SUPERFICIES. See pagina.

SUPERFLUA, *polygamia.* The second order of the class *syngenesia.* The florets of the disk are perfect, of the ray pistillate. As Life-everlasting, Wormwood, Tansey, Elecampane, Yarrow, Mayweed.

Superne. Upwards, towards the top.

SUPERIOR, *superus.* A calyx or corol is superior, when it proceeds from the upper part of the germ. See germ.

Supinus. Face upwards. See resupinus.

SUPPORT. See fulcrum.

Supra-axillaris. See suprafoliaceus.

Supradecompositus. More than decompound; which See. When a petiole is divided and the divisions divided at least once more, and the last divisions have leafets.

Suprafoliaceus. Inserted above the axil, or base of the leaf.

Surculus. A little branch or twig. Applied to the stem or shoot which bears the leaves of mosses.

SUTURE, *sutura.* A seam-like appearance at the meeting of two parts; as the valves of pea-pod.

SWIMMING. See natant.

SWORD-FORM. See ensiform.

Sylvaticus. Growing in woods.

Sylvestris. Altogether wild; growing in wild woods.

SYNGENESIA. (*Sun*, together; *genesis*, springing up.) Anthers growing up together in an united tubular set. The name of the eighteenth class, if *polyadelphia* be rejected, or the nineteenth as established by Linneus. It comprises all those plants, whose flowers are compound, having the anthers in each floret with more or less of their edges adnate; so that the whole (which are always 5) form a tube. Formerly the union of the anthers was the only circumstance noticed in defining this class; which brought the violet, the cardinal flower, &c. into it. But now the flower being compound is taken into consideration; which makes a perfectly natural class. The order *monogamia*, which was allotted to the simple flowers, is of course rejected. The present orders are Polygamia *æqualis*, *superflua*, *frustranea*, *necessaria* and *segregata*; which see.

SYNONYMS, *synonymia.* Different names for the same plant. A list of synonyms has now become essential

to every publication, containing descriptions of plants; on account of the vast multiplication of names. This is ascribable to two causes. 1. A botaanist with but little knowledge of plants, falls in with a plant which he cannot find out; though it is familiar to practical botanists. He immediately gives it a name, and puffs himself into the face of the public as the discoverer. 2. Vanity is often a quality of the indolent. And we find many vain men, who, feeling a strong desire to be cited as the authors of something, sit down at home, and split up and new-name genera and species; which they at length crowd into books to the great injury of the science.

Synopsis. A condensed systematic view of a subject, or science.

System, *systema.* An arrangement of natural bodies according to assumed characters; for the purpose of aiding the mind and memory in acquiring and retaining a knowledge of them. Systems have been proposed in abundance. And we are still infested with system-makers and reformers, which are among the greatest evils incident to Natural Science. Any man of ordinary talents may make a tolerable system in half a day; that is, sixty systems per month. But why not adhere to that which is universally known and established? There may be improvements in the Linnean system. But let them be adopted with caution, and on the authority of the oldest and most experienced botanists.

T

Tæniatus. Ribbon-form.

TAIL. A filiform process terminating a seed, &c. As the Virgin's bower.

Talea. Sucker.

TAPERING. See attènuatus.

TARGETS, *peltæ.* That kind of receptacle of lichens which is flat, close-pressed, and attached to the frond by its whole underside, as if glued; sometimes attached to the bark of the frond. It is broad, kidney-form, or oblong, rarely irregular; covered with a thin coloured disk, with no border except occasionally a very minute accessory one, which seems to circumscribe it. In an early stage it is concave, and concealed by a thin gelatinous fugacious membrane, or veil. Smith.

TARGET-FORM. See peltate.

TASTE. See sapor.

Tectus. Covered.

TEETH OF MOSSES. The outer fringe of the peristomium is generally in 4, 8, 16, 32, or 64 divisions, which are called teeth. See peristomium.

Tegens. Covering.

TEGUMENT. The skin or bark of seeds; as appears very distinct on a boiled pea or bean.

TEMPERATURE. The degree of heat and cold to which any place is subject. This is not limited to degrees of latitude; as high mountains in Pennsylvania produce many plants, most natural about Hudson's bay. In cold regions white and blue petals principally prevail; in warm regions red and other bright strong colours.

In the spring season white petals predominate; towards autumn the yellow are most prevalent. Wildenow.

TENDRIL. That kind of appendage, which is filiform and reaches out to grasp bodies to climb by. As the climbers of grapes and peas.

Tenellus. Tender, delicate and fragile.

Tenuifolius. Slender-leaved.

Tenuis, Thin and slender.

Teres. See terete.

TERETE. Round, columnar, and tapering from the base to the other end.

Teretiusculus. Somewhat terete.

Tergeminus. TERGEMINATE. Thrice-paired. The petiole is forked, these branches forked, and the last branches with paired leafets.

TERMINAL, *terminalis.* Proceeding from or occupying the end of a stem, branch, style, &c.

TERMINATIONS. In expressing resemblances it would greatly lengthen discriptions to introduce words drawing full-length comparisons. As a leaf rerembling the form of an arrow. To avoid this, terminations united to the substantive word by a hyphen have been used; as arrow-shape, or arrow-form. I prefer the termination *form,* making the whole a compound adjective noun. There are cases where *like* becomes a convenient termination; as petal-like stigma in the Iris. Here *form* or *shaped* would be inadequate; as its resemblance consists rather in texture and general appearance, than in shape.

TERNATE. Three-fold. In threes. This term is also applied to compound leaves, where 3 leafets proceed from the end of one petiole; as in the Strawberry. See biternate and triternate.

Terraneus. Appertaining to the earth.

Terreus. Earth-coloured.

TESSELATE, *tesselatus.* Chequered.

TETER. Having a disagreeable smell.

TETRADYNAMIA. (*Tettares*, four; *dunamis*, power.) Four stamens overpowering, or overtopping the other two. The name of the fourteenth class; including all plants whose flowers contain six stamens, four of which are uniformly longer than the other two. The corols of this class are always cruciform. This class is divided into two orders, *siliculosa*, and *siliquosa*; which see.

TETRADYNAMOUS. Belonging to the class tetradynamia.

Tetredra. A 4-sided pod.

Tetragonus. Four-cornered.

TETRAGYNIA. (*Tettares*, four; *gune*, female.) Four-styled. The fourth order of each of the first thirteen classes. It contains all the plants of those classes, whose flowers have four styles or four sessile stigmas. As Holly (ilex,) Pearlwort (sagina,) Pondweed (potamogetan) in the class *tetrandria*. Parnassus grass in the class *pentandria*. Lizard-tail (saururus) in the class *heptandria*.

TETRANDRIA. (*Tettares*, four; *andra*, male.) Four-stamened. The name of the fourth class. It comprises all plants with perfect flowers, having 4 stamens in each; which are not united nor regularly two long and two short.

TETRANDROUS. Belonging to, or varying into, the class *tetrandria*.

Tetrapetalus. Four petalled.

Tetraphyllus. Calyx with 4 leafets.

Tetraspermus. Having 4 seeds to a flower.

Thalamia. See hollows.

Thecæ. The frond, or whole herbage of lichens.

Theca. The hidden capsules of mosses.

Thecæ. The cases or cells containing the seeds in the disk of scutellæ and some other receptacles of lichens.

THORN, or spine. A sharp process from the woody part of a plant. It is an indurated imperfect bud, which when the plant grows in a rich soil, changes to a branch. Pears bear thorns in a poor soil, which disappear in richer. Wildenow.

THREAD-FORM. See filiform.

THREE-FOLD. See ternate.

THRICE-PINNATE. See tripinnate.

THRICE-PINNATIFID. See tripinnatifid.

THROAT. See faux.

Thyrsioides. Flowers disposed in the form of a nosegay.

THYRSE, *thyrsus.* See panicle.

TIDGE or TIGE. See caulis.

Tinctorius. Plants suitable for dyeing or pigments.

TOMENTOSE, *tomentosus.* Covered with fine downy or cottony substance matted together. See lanate.

TONGUE-FORM. See linguiform.

TOOTHED. See dentate.

TOOTHLETTED. See denticulate.

TOP-FORM. See turbinate.

TORN. See lacerated.

TOROSE, *torosus.* Protuberant. Raised in bunches or vein-like protuberances or ridges.

TORULOSE, *torulosus.* Swelling a little; as the ridges on a muskmelon.

Torsio. See intorsion.

Tortilis. Se coiled.

Tracheæ. The air-vessels of Grew. They are spiral channels supposed by Grew to be designed for receiving and distributing air in the vegetable.

Trailing. See procumbent.

TRANSVERSE, *transversus.* Crosswise. It is applied to a partition when it meets the valves of a pericarp in any other part than at the sutures.

Trapeziformis. Having four unequal sides.

TREE (*arbor.*) A large woody plant. The word *large* is very indefinite; but the distinction between tree and shrub is very difficult to express. Perhaps *large* and *small*, interpreted according to the rules relating to parts under *Relative proportions*, will serve to distinguish trees and shrubs as well as an elaborate definition. These terms are not used in specific descriptions. See shrub and suffrutex.

TRIANDRIA. (*Treis* three; *andra* male.) Three-stamened. The name of the third class. It includes all plants whose flowers are perfect, with three stamens in each, not growing to the pistil. This class includes most of the grasses.

TRIANDROUS. Belonging to, or varying into, the class *triandria.*

TRIANGULAR, *triangularis.* Having 3 angles or corners. It is applied to a leaf with 3 points or corners.

TRIBES, *tribus.* See gentes and cotyledon.

Tricæ. See buttons.

Trichotomus. Three-forked. See forked.

Tricoccus. A 3-seeded capsule; or rather 3-grained. It is applied to capsules, which appear as if three, of one cell and one seed each, were grown together.

Tricuspidatus. Three pointed. See cuspidate.

Triduus. Enduring 3 days.

Trifarius. Facing 3 ways.

Trifidus. Three-cleft. See cleft.

Triflorus. Three-flowered.

Trifoliatus. Three-leaved.

Triglochis. Three-barbed. See barb.

Trigonus. Three-cornered. See triangular.

TRIGYNIA. (*Treis*, three; *gune*, female.) Three-styled. The name of the third order in each of the first thirteen classes; comprising all the plants in those

orders, whose flowers contain 3 styles or 3 sessile stigmas in each. As Carpet-weed (mollugo) in the 3d, Alder in the 5th, Dock in the 6th, Buckwheat in the 7th, Rhubarb in the 9th, Sandwort in the 10th, Spurge in the 11th, classes.

Trijugus. Three paired.

Trilobus. Three-lobed. See lobed.

Trilocularis. Thre-celled.

Trinervis. Three-nerved. See nerved.

Trinus. Leaves in threes.

Tripartitus. Deeply divided into three parts.

Tripetalus. Three-petalled.

Triphyllus. Three leafets to a calyx.

TRIPINNATE, *Tripinnatus.* Having the petiole pinnated with other petioles; and this second range of petioles supporting a third range with leafets.

TRIPINNATIFID, *tripinnatifidus.* A pinnatifid leaf, with the divisions pinnatifid, and those latter divisions pinnatifid again. See pinnatifid and bipinnatifid.

Triplinervis. See trinervis.

TRIPLY-COMPOUND. See Supradecompositus.

Triqueter. Three-sided.

Trisperma. Three-seeded.

Tristis. Dull-coloured, melancholy.

TRITERNATE, *triternatus.* When a petiole is divided into three branches; and the branches again divided, each in three parts; and on each of the last divisions three leafets. See biternate.

Trivalvis. A pericarp with 3 valves.

Trivascularis. Having three cup-form cells.

TRIVIAL NAME, *trivialia nomina.* The name of a species, not including the discriptive terms. President Smith says, *trivial name* is now superfluous; as specific name is no longer used for the discriptive terms. See specific name.

TRUNCATE, *truncatus*. The end appearing as if cut off. Terminating in a strait edge, either perpendicularly or obliquely transverse.

TRUNK, *truncus*. The bole of a tree. See bole. It is also applied to the stem of plants not woody; and sometimes to the caudex of a root.

TUBE. The lower hollow cylinder of a monopetalous corol.

TUBERCLES, *tubercula*. That kind of receptacle of lichens, which is spherical or slightly conic, nearly closed, crustaceous, black; more or less immersed in the surface of the crustaceous frond, which it elevates; or sometimes it is exposed, being merely sessile. Each contains a ball, or mass, of connected seeds, destitute of cells, envelloped in a common membrane. The whole mass of seeds is at length discharged together by an orifice at the top of the tubercle. We often find these tubercles after the seeds are discharged.

Tubercula. See tubercles. This word is sometimes applied to rough points on leaves, &c.

TUBEROUS, *tuberosus*. Roots, which are thick and fleshy, but not of any regularly globular form. They are *knobbed*, as potatoe; *oval* as Orchis and some Anemones; *Abrupt*, as the bird-foot violet; *Fascicled*, as the Asparagus.

TUBULAR, *tubulatus*. Having a tube, or being in the form of a tube.

TUBULOUS, *tubulosus*. That corol of a compound flower, which forms a whole tube, not a ligulate floret. It is also applied to a perianth, if the whole or the lower part is a hollow cylinder.

TUFTED. See fascicle.

TUNICATE. See coated.

TURBINATE, *tubinatus*. Top-form. A cone with the point downwards.

TURGID, *turgidus*. Thickened, swollen, but not inflated.

TURION, *turio*. See gemmation.

TWIN. Two connected or growing together.

TWINING. Ascending spirally. See dextrorsum and sinistrorsum.

TWISTED. See coiled.

TWO-RANKED, or TWO-ROWED. See distichus.

V

Vagina. Sheath. That prolongation of a leaf, which forms a cylinder around the stem. See sheath.

Valvatus. Resembling the valves of a glume.

Vaginans. Sheathing.

Vaginatus. Sheathed.

VALVE, *valva*. The several pieces of a pericarp, which separate naturally on ripening, are called valves. Also the leaves, or chaffs, of a glume. Each piece is called a valve. This name is sometimes applied to the scales, which close the tube in some corols.

VALVELET, *valvula*. Little valve.

Variegatus. Variously coloured.

VARIETY, *Varietas*. The changes produced among plants of the same species by accidental causes; as by soil, situation, culture, climate, &c. These changes respect *magnitude*, *fullness* of flowers, *crisping* of leaves, *colour*, *taste* and *smell*. If the same kind of plant can possibly be produced from the seed of other kinds, these are but varieties of the same species. All apples are but *varieties* of the same species; because if the seeds of a sour apple be planted, they will produce trees bearing sour, sweet, tart, red, green, large and small apples pro-

miscuously. But the Quince is a different species; because it cannot possibly be produced from apple seeds.

Vasa, Vessels. The sap-vessels of vegetables have formed the subject of much enquiry and discussion. The best summary of the various theories may be found in Smith's Elements: beginning at the 43d page. See sap and camb By cutting very thin transverse segments of aquatic plants and holding them to the light, considerable practical knowledge may be obtained on this subject.

Vaulted. Arched over like the roof of the mouth; as the upper lip of some labiate corols.

Vegetable. An organized substance, whose procreative organs decay before the individual dies. As in the pea; the stamens and pistils decay before the rest of the plant. It is divided into the fructification, root and herbage. See natural history.

Vegetable Kingdom. This is the name Linneus gives to all the subjects of the science of botany. See natural history.

Vegetable Substance. The *elementary principles* of vegetables are principally carbon, hydrogen, and oxygen; some contain nitrogen.

The *proximate principles* are very complicated. 1. *Gum* is a mucillaginous substance; as Cherry gum, Arabic gum, &c. Most gums are softening and sheathing to the stomach, but not very active. Professor Silliman found the gum of sassafras (laurus sassafras) the most effectual remedy for his eyes, after they had been greatly injured by the explosion of fulminating silver. 2. *Resin*, is found in most pines. In a more refined and volatile state it becomes the true *balsam;* but the substance usually called balsam is a coarse mixture of resin and

volatile oil. Resin and gum combined was the substance burned, when *frankincence* offerings were made by the Jews. 3. *Starch*, is the most nutritious part of vegetables. The Potatoe consists almost entirely of starch crystals. The starch should be washed out of flour in making paste; which can be done best after the paste is raised by a little yeast. It then leaves the *gluten* almost pure, and very strongly adhesive. [Extract from M. S. notes taken at Professor Silliman's lectures in March 1816.]

Incipient germination seems to increase the proportion of gluten and diminish that of the starch. For flour made of grain, which had began to sprout in the field during a wet harvest, is very adhesive, when manufactured into dough.

VEIL. See calyptra.

Vellus. Fleecy, or a fleece. This term is also applied to that kind of *clouds* which float swiftly about the sky, without any strait side, and resemble an open fleece of wool. See cirrous and natural history.

VEINED, *venosus*. A leaf with the ribs or tendonous fibres variously branched.

VENTRICOSE, *ventricosus*. Swelling out as if blown up with wind. Or rather bellied out. See inflated.

Ventriculosus. A little ventricose.

Vernalis. Coming forth early in the spring.

VERNATION, *vernatio*. See foliation.

Verrucæ. Variously formed protuberances, solid and usually smooth, on the crust of some lichens. Sometimes the receptacles grow on them.

VERRUCOSE, *verrucosus*. Warty. Having little warty knob-like substances on the surface.

VERSATILE, *versatilis*. Lying horizontally and moving freely on a point. Particularly applied to anthers lying on the point of the fillament.

Vertex. The summit.

VERTICAL, *verticalis.* Standing or hanging up and down at right angles with the horizon; or parallel to the stem.

Verticillatus. See whorled.

VERSICULAR, *versicularis.* Containing, or consisting of, a cellular substance.

VESSELS. See vasa.

Vexillum. See banner.

Vigiliæ plantarum. The determined hours of the day, when certain plants expand and shut their flowers. See sleep.

VILLOSE, *villosus.* Having a superficial covering of long soft whitish hairs. The calyptra of some mosses consists wholly of a mat of hairs.

Villus. Fine soft hairs.

Vimen. A withe. A twig which is slender and flexible.

Violaceus. Violet coloured.

Virescens. Inclining to green.

Virgatus. Wand-like. Slender rod.

Viridis. Green.

Virgultum. Small twig.

Virosus. Nauceous disgusting smell.

VISCID, *viscidus.* Covered superficially with a tenaceous juice.

VISCIDITY, *viscositas.* Clamminess. Possessing an adhesive quality.

Vitellinus. Yellow with a tinge of red.

Vitellus. A thin substance in the seeds of some plants, closely connected with the embryo, but never rising out of the ground with it in germination. It is never in plants with genuine ascending cotyledons; and perhaps it may serve to perform the functions of cotyledons. It is between the albumen and embryo, when albumen is present. It composes the bulk of the seeds of Mosses and Ferns. Smith.

Vitreus. Glassy, colourless. See hyaline.

VIVIPAROUS. Producing its offspring alive, either by bulbs instead of seeds or by seeds germinating on the plant.

Uliginosus. Growing in damp places.

Ulna. Arm's length.

UMBEL, *umbella.* That kind of inflorescence, where several flower-stems diverge from one place, like the braces of an umbrella; bearing florets on their extremities. If these flower-stems are subdivided, a *partial* umbel is formed.

UMBELLIFEROUS. Bearing umbels; as Carrot, Dill, Fennel.

UMBELLET, *umbellula.* A partial or lesser umbel.

Umbilicus. A navel.

Umilicatus. Navelled. Having a kind of central roundish hollow or protuberance; as on the end of an apple, or of a pumpkin.

Unbonatus. See bossed.

Unangulatus. One-angled.

UNARMED. Having no thorns nor prickles.

Uncialis. As long as the thumb-nail.

UNCINATE, *uncinatus.* Hooked at the end. See hamus.

Unctuosus. Greasy, unctious.

UNDULATE, *undulatus* or *undatus.* Wavy. Rising and falling, or extending and receding in waves.

UNDERSHRUB. See suffrutex.

UNDIVIDED. See indivisus.

UNEQUAL. The parts not corresponding in size, form and duration.

Unguiculatus. A petal with a claw.

Unguis. A claw, which see.

UNGULATE, *ungulatus.* In the form of a horse's hoof; as the common touch-wood (boleteus igniarius.)

Unicapsularis. Having one capsule to each flower.

Unicus. Single. Only one.
Uniflorus. One-flowered.
Uniformis. All parts alike, or corresponding.
Unilabiatus. One-lipped.
UNILATERAL, *unilateralis.* See one-sided.
Unilocularis. One-celled.
Unisexus. Either staminate or pistillate, not perfect.
Univalvis. One-valved.
Univascularis. Having one cup-form cell.
UNIVERSAL, *universalis.* See partial.
VOLVA. The ring or wrapper of some fungus plants, which contracts in size as the plant grows older; as the mushroom. Wildenow calls that the volva only, which encloses the fungus in the young state, and remains close upon the ground ever after. The ring around the stem above, he calls *annulus.* See ring.
Volubilis. See twining.
UPRIGHT. See erect.
URCELATUS. Bellying out like a pitcher, and not contracting much at top.
Urens. Stinging, armed with stings.
URN-FORM. Swelling in the middle and contracting at the top; as the calyx of the Rose.
Ustilago. Smut in grain.
UTRICLES. The little bag-like reservoirs for sap.
Utriculus. A little bladder.
Utrinque acutus. Sharpening at both ends.
—— *glaber, villosus,* &c. sleek, downy, &c. both sides.

W

WAND-LIKE. See virgatus.
WAVED OR WAVY. See undulate.

WEDGE-FORM. Obovate with straitish sides.

WHEEL-FORM. A monopetalous corol with a spreading border and an extremely short tube.

WHORLED. Surrounding the stem in numbers at intervals; as the leaves of Bedstraw, and the flowers of Motherwort.

WINGS. The two side petals in a papilionaceous corol.

It is also applied to the membranes affixed to seeds or pericarps. *Monopterygia*, 1-winged. *Dipterygia*, 2-winged. *Tripterygia*, 3-winged. *Tetrapterygia*, 4-winged. *Pentapterygia*, 5-winged. *Polypterygia*, many-winged.

WITHERING. Having a shrivelled and decaying appearance, though not actually in a state of decay; as the flowers of elm (ulmus.)

WOOD. The most solid part of trunks and roots of trees and shrubs. It is also applied to the part of herbaceous plants between the bark and pith.

WOODY. Not herbaceous.

WOOLLY. See lanate.

WRINKLED. See rugose.

WRITHED. See coiled.

WYTHE. See vimen.

Z

ZIGZAG. See fluxuose.

ERRATA.

Under Calyx, insert *germ*, between "the" and "receptacle."

Under Camb, erase "killed" and insert "*injured.*"

Under Diverging, insert *almost* between "form" and "a right."

"Faniculus" should be *Funiculus*, and stand between Fungus and Funnel-form.

Under Gemmatis, alter "germation" to *gemmation.*

"Mane" should be *Male.*

Under Ovate instead of "one end," read *the end next to the Stem.*

Under Parenchyma erase "pubescence" and insert *substance.*

Versicular should be *Vesicular.*

Umilicatus should be *Umbilicatus.*

Urcelatus should be *Urceolatus.*

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