John C Warren Esq^r
from the Author

AN

ADDRESS

ON THE

BOTANY OF THE UNITED STATES.

AN

ADDRESS

ON THE

BOTANY OF THE UNITED STATES,

DELIVERED BEFORE THE

SOCIETY

FOR THE

PROMOTION OF USEFUL ARTS,

AT THE CAPITOL, IN THE CITY OF ALBANY, ON THE 9TH DAY OF FEBRUARY, 1814.

To which is added,

A CATALOGUE OF PLANTS

INDIGENOUS TO THE STATE OF NEW-YORK.

BY JACOB GREEN, A. M.

One of the Counsellors of the Society, and Member of the Linnæan Society of Philadelphia.

Fortunatus et ille, Deos qui novit agrestes,
Panaq; Sylvanumq; senem, Nymphasque sorores.
Virg.

ALBANY:

PRINTED BY WEBSTERS AND SKINNERS.

1814.

ON THE

BOTANY OF THE UNITED STATES.

"IN every country an accurate knowledge of its internal resources, forms an object of political importance. But a description of its natural productions is connected with the interest of society at large, and eminently calculated to illustrate those indications of goodness and intelligence, which may be traced in every form of matter, from a particle of earth to the wonderful construction of an organized and sentient being."*

These sentiments should be felt by every well wisher of science; and every enterprising and well disposed citizen, will be willing to contribute, as far as he is able, to the information here contemplated. Under this conviction, I have determined to address you this evening ON THE BOTANY OF THE UNITED STATES. A subject which, considering our peculiar and important advantages for its cultivation, has been, I conceive, much neglected. I propose, first of all, to call your attention to some of the advantages which we possess for the study and improvement of Botany.

A country can scarcely be said to exist till the period of its civilization. The savage, with a mind uninformed by knowledge, and affected by no desires or emotions, but those of immediate preservation and enjoyment, passes, with little regard, the most important productions of nature. Even those which by their novelty or usefulness have engaged his attention to-day, will often be forgotten in the hurry of to-morrow. Of Botany, he knows nothing. He has a slight and imperfect acquaintance only with a few medicinal and

* Edinburgh Review.

nutritive plants, and of these indeed, he has scarcely more knowledge than that which is possessed by his wild associates, the beasts of the forest. Nature to him is a blank—All her endless varieties exist in vain. It is civilization alone which opens the stores and discloses the mysteries of creation, and enables man to appropriate to himself whatever is necessary, useful and ornamental. Till the discovery of America, therefore, by civilized Europe, the advantages of our country for the study of Natural history in general, and of Botany in particular, could not be appreciated. These advantages, I have affirmed, are peculiar and important.—They are so, because in a new country all vegetation, being in its original state, the Botanist is not perplexed in his investigations and discoveries, by those changes in the qualities and the appearance of plants, which the culture and the innovations of art always occasion. Add to this, the important circumstance, that the greater portion of our country is placed in that happy temperature of climate, where vegetation is neither wholly checked by the severity of northern blasts, nor its sources dried up by the too ardent rays of the sun. It is true indeed that hybridous productions are every where to be found,* and that a doubt may be suggested whether all the *species plantarum* are not the effect of changes produced by time; and that the *genera* alone were the immediate productions of the Creator. Be this as it may, it is still certain, that a newly discovered country affords far less varieties of this kind, than are found in regions where the improvements of cultivation have been introduced.

The moisture of the ground and the state of the atmosphere is not so much varied in America by a difference in latitude as in the countries of the old world. From this cause probably we witness that general and remarkable abundance of herbs, shrubs and trees which distinguish the different parts of this continent. There is certainly a lux-

* See Wildenow's Principles of Botany—and also a Dissertation on the Sexes of Plants by Linnæus.

uriance in the vegetation of North and South America which is unequalled by any other portion of the globe. And as one extremity of the United States is influenced by the severity of polar cold and the other powerfully affected by equatorial heat, while the far greater part, as already remarked, is found under temperate latitudes, we should expect what we know to be the fact, that the variety of our plants would be peculiarly great. But that we may the more clearly discover the advantages enjoyed in the United States for the study and improvement of Botany, allow me to present you with a sketch, a little more distinct, of the face of the country, and of its soil and climate; with a cursory notice of some of the plants already known.

That vast chain of mountains which extends in a north and south direction, across the United States, is the most striking feature of the country. This great ridge is intersected by many others, which, though *comparatively* small, are, when separately taken, by no means inconsiderable.—These mountains are generally of the *primitive* formation.

The rivers which descend from these mountains, are another striking characteristic. The St. Lawrence, the Hudson, the Susquehanna, Ohio, and Missisippi; whether we consider the length of their course, or the quantity of their water, may vie with any in the old world.

Our lakes are no less conspicuous and peculiar than our rivers and mountains. Huron and Superior, Ontario and Erie, are without rivals, and almost without resemblance, in any other part of the globe.

Now it is to be remembered that the banks of rivers, the bases of mountains, and the margin of lakes, are always sought after by the Botanist, as particularly favorable to his researches.

The soil at the base of our mountains towards the Atlantic, is generally composed of a rich mould, from two to four feet in depth. Nearer the ocean a clay soil, mixed with loom seems to predominate.*

* Rush's Medical Enquiries and Observations—also Proud's History of Pennsylvania.

That portion of land, which forms the soil of most of the states included between the sea and the ridge of hills which extends westerly from the southern part of the state of New-York, round the rivers Patapsco and James, to the Roanoak in South-Carolina, is generally loose in its texture and rich in its composition. It was perhaps formed later than most of the other country, being in many places manifestly alluvial, from the surrounding heights. This region of ground is intersected by numerous streams of water, on the banks of which a multitude of herbs and shrubs are found, that were thought to grow only in the upland country. In other parts of this tract, plants are seen which were supposed natives only of the southern states. Thus in the lower parts of New-Jersey, Euphorbia Ipecacuanha has lately been discovered.

My purpose does not require a particular description of the nature of the soil in every portion of the country. It is sufficient to state that it is generally fertile.

Take now, in connexion with the statement just made, an extract from Wildenow's Principles of Botany and Vegetable Physiology. "We find (says he) that mountainous countries are richer in plants than flat countries, and that in primitive mountains the number of plants exceeds that of the floetz mountains. A country of primitive rocks has plants, which other mountainous countries do not possess. In all plains of the same latitude, however far they may extend, the same plants always occur; only with some little varieties dependant on difference of soil. In primitive rocks, and at their foot, we again meet with all the plants of flat countries. Whenever primitive rocks surround a flat country, we find all the plants of this at their root, and even at their summits; but after ascending, and descending on their opposite side, we find a different vegetation, which again extends as far as the next mountainous chain. Now, who will doubt that all the plants of flat countries which were found at a later period, came from the high mountains; and that the primitive mountains of our globe, were the chief sources, as it were, of

the floras of the different countries. Hence America is so full of plants, because from the North Pole to the South high mountaineous chains, with numberless intermediate branches, intersect it. Hence Canada produces different plants from Pennsylvania, this again from Virginia, and this again produces different from Carolina. Hence the North-West coast of North America produces plants which totally differ from those of the North-East coast."*

The influence of mountains, lakes and extensive forests, on the climate of a country, is well ascertained ; and since we are peculiar in all these respects, our climate will of course be peculiar also. But it is impracticable to give a description of all the peculiarities of our climate, produced by local circumstances. The general prevalence of cold, however must not be unnoticed. Its power on the Western continent is not confined by the limits of the frigid, or the temperate zone. It even mitigates, by its influence, the excessive heat of the torrid zone. In the same parallels of latitude, on the Eastern continent, winter is scarcely felt, while in America its rigor is extreme. On the contrary, the sultry plains of Asia, and the burning sands of the African desert, have no counterparts in America. Our summer months indeed are frequently warm,† but their warmth, like the cold of winter, is not lasting.‡ This influence of cold on the American continent, with the frequency and violence of our thunder storms, and the sudden change of air after them, may be the causes why we abound more in biennial and perennial plants, than any other part of the globe.

It is at least the general opinion,§ that the weather of the United States is more changeable, and less severe, than formerly ; occasioned by the diminution of forests, the draining of swamps, and the improvements of agriculture. If the

* Wildenow's Botany, &c. page 382—the English translation.

† In July 1812, lat. 42 1-2, Far. Thermometer stood at 96°.

‡ See some interesting notices on this subject in vol. 2d of Robertson's History of America, and Pinkerton's Geog.

§ I am well informed that the late Dr. Rittenhouse (a high authority certainly) was decidedly opposed to this opinion.

fact be so, it will have at least a gradual influence on the vegetation of the country.*

As the plants of this country, which are generally known, may be found in catalogues formed on purpose to embrace them, I shall notice them but slightly and imperfectly, in mentioning some vegetable productions for the illustration of the point before us.

The forest trees in North America are almost beyond number. Those which are already arranged and classified, amount to more than one hundred and fifty species, while in all Europe, botanists reckon but forty.† The Chesnut, the Walnut, the Hickory and Gum, here grow to an enormous bulk, and are nearly of every species. The Elm, the Poplar, the Beech, the Maple and the mountain Ash, are very common ; and both for size and beauty are no where excelled. Many varieties of the Oak are here profusely planted by the hand of nature. Our sandy tracts, unlike the wastes of Zaara or Arabia, are quite productive. Here flourishes the Pine in all its varieties, the Hemlock, Spruce and Juniper, the Cedar, the Fir, and a species of the Larch.

Among the smaller plants may be found the Geranium, Ceanthus,Gulthæria procumbens, Monarda, Cunilla and Solidago Odoria, most of which are frequently substituted for tea. The Lobelia cardinalis, the Aster, Syringa, and many beautiful species of the Lonicera or Honeysuckle, which spread their flowery garlands from tree to tree.—The Phleum, Avena Elatior, Myosotis, Sinosurus, Aira, Briza, Draba, and the far famed Agrostis—The Galium, the Sanguisorba, the Quercitron Oak, the Sophora, and the Rhus Toxicodendron, may be mentioned as some of our vegetable dyes.

---

* The number of swamps in the United States, and which frequently occupy a large and valuable extent of country, might easily be converted into productive soil, by strewing lime over them—The putrid effluvia which they exhale is destroyed by this process, and the decaying vegetable matter, is reduced to a solid fertile mould. Linnæus first suggested this plan, and in England many of the fens and bogs are made to yield abundantly. The practice is the *liming of swamps.*

† Michaux—Med. Repos.

In the Southern States we find the lofty Palmetto, the Papaw Fig, the great Magnolia, and the Mangrove tree, the only shrubby plant that can flourish in salt water.

Mr. Pinkerton, when speaking of the Botany of this country, observes perhaps with more elegance than correctness, that " the glories of the American Flora are principally confined to Virginia and the Southern States. It is here that the unfading verdure of the wide savannas, the solemn magnificence of primeval forests, and the wild luxuriance of the steaming swamps, offer to the astonished admiration of the Botanist, every thing that by colour, by fragrance, or by form, can delight the senses or fix the attention." In this part of the country on the level of plains by the sides of the rivers, grow " the Magnolia glauca or Beaver tree, American Olive, and Gordonia Lasianthus, silvered over with fragrant blossoms, with numerous species of Azalias, Kalmias, Rhododendrons, arranged by the hand of nature into thickets and shrubberies, entwined and overarched by the crimson Granadillas and the fantastic Clitoria, here display their inimitable beauties in full perfection. The sides of the pools and the shallow plashes, are adorned by the bright cœrulian flowers of the Axia, the golden blossoms of the Canna Lutea or the rosy tufts of the Hydrangia, while the edges of the groves and the dubious boundaries of the savannas, rising imperceptibly towards the forests, are fringed by innumerable gay varieties of the Phlox, by the shrinking Sensitive plant, the irritable Dionæa, the glowing Amarillis Atamasco and the impenetrable ranks of the Royal Palmetto.

The Botanist will find that many of the plants mentioned by this florid writer, are met with in most of the other states.

Our mountainous ridges and our sea coast, are very prolific in Cryptogamic vegetables. The Equisinum, the Osmunda, Polypodium, Adianthum, Onoclea and Bryum, are some of the ferns and mosses. The Lichen, Tremella, with many species of Jungermania and Marchantia, are the sea weeds or Algæ, and the Boletus, Clavaria, and Lycoperdon, are the Mushrooms or Fungi.

But in addition to advantages which are peculiarly our own, we have many in common with Europe. The affinity, in some particulars of our climates, to those of Europe, gives us most of their productions. It is owing, indeed, to this circumstance, and to the easy and continual intercourse between the two continents, that it is sometimes difficult to distinguish those plants, which are indigenous to our soil, from those which are only naturalized, and which grow spontaneously after their adoption. The fact is worth observation, that some vegetables grow with more luxuriance, and arrive at a greater apparent perfection, when removed to a soil and climate, differing considerably from that in which they were formed in their native state. Thus the potatoe (Solanum tuberosum) in the year 1565, was first introduced from this country into Ireland, and thence, by a fortunate shipwreck, into Lancashire in England, in both of which places it thrives better than in America.* If the agriculturist would take advantage of such facts, many articles which at present are imported might probably be made staple commodities.

Having now pointed your attention to some of the peculiar advantages which we possess for botanical enquiries and improvements, and noticed a little, the variety and abundance of our vegetable productions, the remainder of this address will be employed in remarks, more appropriate to this occasion: on a number of plants in our country, which claim particular attention from the agriculturist, the manufacturer, the artist, and the physician. And you will please to remember that as practical utility, more than recondite science, is the leading object of our society, I ought not to hesitate to throw out a number of observations, and to indulge in some diffuseness, which might otherwise be improper.

As there are are many vegetable productions, which seem

* Those who wish to investigate this subject will find much information in the Medical Repository, and in Dr. Muhlenberg's communication to the American Philosophical Society.

naturally adapted to our country, and which have as yet received but little attention, the labour of the farmer would certainly be employed to the best advantage in the cultivation of them. Of these I shall notice a few.

The Sinapis or Mustard is a plant, which might yield no trifling profit to the American cultivator. Small clusters of it are seen growing in our fields and gardens; but whether it is a native of the country, or merely the fruit of chance, I am not able to determine. In some catalogues, however, it is marked as an exotic; but our climate is congenial to its habit, and almost every soil is adapted to its growth. A gentleman from Orange county, in this state, has informed me, that he collected from half an acre of but tolerable land, fourteen bushels of the seed, which he believed equal in quality to that of the Sinapis Arvensis, commonly known by the name of Durham mustard. There are many species of this herb, but it would be well for the cultivator to confine his attention to the one just mentioned, the seed of which is more abundant and of a better quality than in the other kinds. The high price given for imported mustard, and the facility with which it can be raised, induce a belief that farmers generally might find their account in making it an article of culture and traffic.

The curious and beautiful Candle Berry Myrtle (Myrica Cærifera) is very abundant in many parts of the United States. The wax which this tree yields would amply compensate the trouble of obtaining it. In Maryland, on the shores of the Chesapeake, and near most of the streams which flow into that bay, it is found in large quantities. It is also scattered over this state growing in a wet soil, and very rarely exceeding five or six feet in height. The plant, however, is not confined to marshy grounds. I have seen it on upland in Connecticut, rising to the height of 10 or 12 feet. This species indeed is rarely seen, and the berries are not so abundant in this as in the other kinds.* In Louisiana there

* I rather think the Connecticut Myrtle wax tree is only a variety of the species which is found in a wet soil.

is another species of this tree as large as the Cherry, bearing pointed leaves* (Myrica Cærifera Angustifolia); those of the other being broader and more obtuse (Myrica Cærifera Latifolia.)† In France the Myrtle is cultivated for its wax,‡ which is prepared by simply boiling the berries in water; the wax rising to the top of the vessel. It is apt to be of a pale green colour, which is not reckoned handsome. This however may probably be remedied by throwing some alkali into the boiling water, which will convert the wax into a deep green. The experiment indeed I have not attempted, but there can be no doubt of its success. By chemical agents it is probable that almost any colour may be given to this wax. From four pounds of the berries, one pound of wax is obtained, superior in quality, and applicable to all the purposes of bee's wax. Candles made of it afford a clear white flame; and if burned newly made, they emit an agreeable, and it is said a salubrious odour.—Should the Myrtle wax excite proper attention it might be highly advantageous to medicine as well as to the arts.§

The Papaver or Poppy¶ for the variety of its species and the richness of its colours is not exceeded by any of the garden flowers. The petals both of the single and double kind are ornamented with every shade of crimson, yellow and purple; and hence we find it prized in this country more for its beauty than its inherent virtues. It begins however to receive some attention for its medicinal qualities in many parts of the country—In our neighborhood, at

---

* Medical Repos. vol. 12, p. 191.

† Two varieties of this tree are found at the Cape of Good Hope. Barrow's Tour in Africa, p. 18, Am. ed.

‡ Medical Repos. vol. 12, p. 192.

§ For the medicinal qualities of the Myrtle wax, see Barton's Collections, part 2, p. 4—and for experiments on its analysis, Dr. Bostick's Memoir in Nicholson's Journal, March, 1803—and for the mode of propagating the tree and manufacturing the wax, C. L. Cadet's Account, Nicholson's Jour. vol. 4th.

¶ This article might perhaps with more propriety be inserted in the list of medical plants, but as an important agricultural object I have thought proper to place it here.

Niskeuna and Lebanon, the Society of Shakers raise the Papaver Somniferum; and they have supplied this city, for a short time, with opium, some of which was little inferior in quality to that imported from the Levant or the East-Indies. Dr. Rickertson, of Dutchess county in this state, also cultivated the Poppy to advantage. From one plant he procured seven grains of opium. A particular account of his success will be found in the first volume of our Transactions.* As far north as New-Hampshire, Dr. Spalding, prepared this gum from the true Opium Poppy (Papaver Album) and also from the common Poppy of the garden.† These experiments are sufficient to prove the readiness with which this plant may be raised, in almost any part of the country, and the valuable addition it would make to our domestic resources will not be questioned.

Opium, which is the inspissated juice of the Poppy, is gathered from the capsules, before, or at the time they are fully ripe, by making four or five longitudinal incisions in them, from the stalk of the plant upwards—Care must be taken not to penetrate the cavity of the seed vessels.—Opium may also be obtained by pounding the dried leaves, stems and capsules, boiling them, when pulverised, in water, and then evaporating and cleansing the mixture.‡

Opium has also been extracted from the common Lettuce, (Lactuca Sativa) simply by evaporating the juice of the plant. Eight heads of full grown Lettuce yielded, in one instance, seven drachms of Opium. Hops also contain a large quantity of the narcotic principle, and the extract of Hops is now in use in some places as an anodyne. Indeed we abound in every species of anodyne plants, and the country physician, with a little care, might supply himself with opiates from his own garden.

---

* Agricultural Transactions, vol. 1st, p. 264.

† Med. Repos. vol. 13, p. 193. Archives, vol 2. p. 177.

‡ For a particular account of this method of extracting Opium see Archives of Knowledge, vol. 2nd, page 169.

But I must observe that the Opium of the Poppy is not the only benefit which its cultivation would afford—From the seeds an oil may be extracted as salubrious and agreeable as the finest Florence oil—The quantity of this oil which is consumed, and the frequent difficulties which attend its importation, would make the extraction of it from the Poppy a lucrative employment.* I am glad to state that in Pennsylvania some acres of ground are planted with the Poppy for this purpose. As the quality of the Olive oil is much affected by the acidity or richness of the soil in which the plant grows, it would be well to notice these circumstances in the cultivation of the Papaver.† It is hardly necessary to add that the opium and the oil may both be extracted from the same plant.

Large quantities of Sugar are annually extracted from the Maple tree, (Acer Sacharinum) in many parts of the United States; and the subject has already received the attention of some writers.‡ I shall therefore in this place notice only the Sugar Cane, (Sacharum Officinarum) this was

---

* There have been many doubts suggested respecting the wholesome qualities of this oil---but the question that it is not deleterious is now settled---See the Abbe Rosier's experiments, quoted in Archives, vol. 2, p. 176.

† At Harmony, half a day's ride from Pittsburgh, (both places objects of very great interest) the settlers, use oil expressed from the poppy seed, exclusively, in lieu of olive oil for sallads, &c. It is nearly, if not quite equally good. This oil is becoming common in Europe as a substitute for olive oil. The poppy seed, may be eaten with impunity when ripe. I do not see why its use should be confined to the settlement of Harmony. The Ben, Bene, or Benni Seed common in the Carolinas, can furnish, as I am informed, oil enough to supply the United States at a cheap rate. I have eaten the oil of the Ben or Behen nut in England, and I find no difference between it, and the olive oil. Why should this last be imported? But I doubt whether the Ben or Behen nut be the same with the Benni seed. I suspect this last to be the *Sesamum*; but I have never seen it. The Behen nut, *Glans unguentarius*, *Balenos murepsiki*, is the fruit of the *Gnilandina Moringa*. The oil is prepared in the Levant, in Egypt, in Syria, and in Italy, by expression. It is valuable for its purity, and its freedom from smell and taste, and for its property of remaining long without alteration or rancidity, which makes it extremely valuable in pharmaceutical preparations. *Rees' Encyclopædia.*

‡ See American Philo. Trans. for an important paper on the Maple tree---By Dr. B. Rush.

introduced into Georgia a few years since and has been found to grow there in great perfection.* The sacharine matter of the Georgia cane is quite as rich and plentiful as that from the cane of the West-Indies. It is supposed that most of the land in that state near the coast, south of Sunbury, may be converted into sugar plantations; and since it is pretty well ascertained that more cotton is raised than the manufactories of that article consume, the sugar cane might be advantageously substituted for it.† The interests of humanity, however, would not be advanced by the exchange, as they employ more slaves to make the sugar than to cultivate the cotton.

The Fiorin Grass, or Agrostis Stolonifera, is a native of the United States.‡ Our fellow member, Charles Whitlow, first discovered it in Sussex county, New-Jersey, and afterwards on the margin of the Genesee river—It grows also in great profusion on the island below this city.§ Dr. Mease mentions that he found it on the commons of Philadelphia. This I believe to be incorrect. It is the Agrostis Capillaris,¶ and not the Stolonifera, which is seen in that place.

The Fiorin Grass has excited much attention in this country, since the introduction of Merino Sheep; these animals being remarkably fond of it, and the grass, from its succulent qualities, being well adapted for their fodder—Indeed most cattle prefer it as food to the other grasses; and it is particularly proper for cows, as it is said to increase the quantity and to improve the quality of their milk.

The advantages in agriculture of the Agrostis are of no

---

* Medical Repos. vol. 12, p. 192.

† Dr. Mease recommends the raising of the papaver in room of the cotton.

‡ There are six species of the Agrostis mentioned by Dr. Muhlenberg as natives of this country, two of these are new species—the Capillaris is among the number but not the Stolonifera—See Muhlenberg's Floræ Lancastriensis in American Philoso. Trans. vol. 3, p. 160.

§ On this island is found the Avena elatior and in the small compass of 6 feet I have seen 6 or 8 different species of grass.

¶ Archives of Useful Knowledge, vol. 2, p. 278.

recent date. There is a species of it called Durva, growing in the North of India, which for a long time has been very greatly prized. Sir William Jones in his catalogue of Indian plants, when speaking of this, observes " its flowers in their perfect state are among the loveliest objects in the vegetable world, and appear through a lens like minute rubies and emeralds, in constant motion from the least breath of air—It is the sweetest and most nutritious pasture for cattle, and its usefulness, added to its beauty, induced the Hindus in their earliest ages, to believe it the mansion of a benevolent nymph. Even the Veda (or holy and immortal book) celebrates it in the following text from the Athervana.* " May Durva which rose from the water of life, which has a hundred roots and a hundred stems, efface a hundred of my sins and prolong my existence on earth a hundred years."†

Among the many superior qualities of the Fiorin Grass are the following—Its active principle of life, which is not destroyed by the operations of nature fatal to other grasses —It thrives equally well in a moist, a dry, and a shallow soil—It appears little affected by the influence of the sun—Hence it may be found growing near the north side of a wall—It is regardless alike of the severe cold of winter, and the intense heat of summer—Its crops are enormous and double, both crops, in one instance, amounted to nearly eight tons and a half per acre,‡ and in another ten tons were gathered.§

The propagation, culture and properties of the Fiorin Grass have been unhappily exaggerated by the lovers of new improvements; who, not satisfied with advantages which are really peculiar, attribute to this herb every fancied desideratum—Yet, after making sufficient allowances on this score, the Fiorin Grass has unquestionably many

---

* The fourth great division of the Veda.
† Quarterly Review, vol. 1st, p. 307.
‡ Archives of Knowledge, vol. 2, p. 273.
§ See Edinburgh Farmer's Magazine.

excellencies, which ought to give it the highest standing in this class of vegetables.

The sea weeds which are seen in such quantities along our coasts, might be turned to great account; and this portion of our territory which has been resigned to *hopeless sterility*, may thus be rendered productive.* Every rock and island near the Atlantic is covered with the Cryptogamia Algæ, which by calcination is converted into kelp a salt esteemed at a much higher rate than the pearl ash in its purest form.† Kelp is employed in the manufacture of glass, alum and hard soap. The only use made of the sea weed at present is for manure, which is scattered loosely over the ground, just in the state in which it is taken from the sea shore after a storm.

Barrilla which is made in the same manner as kelp, and employed for the same purposes, is procured from the Cryptogamia Filices or ferns, which grow not only along the coast but in the upland country. The state of New-Jersey is noted for the production of them.

Kelp and Barrilla are made by burning the plants in kilns, so that no air can approach them during their calcination.‡ It is somewhat singular that these articles have not been made the subject of commerce by the enterprising people of New-England.

The Urtica Whitlowi, discovered in the year 1810, by Mr. Whitlow, promises to be a better and more lucrative production than hemp or flax. Dr. Muhlenberg gave this important plant its present name in compliment to the discoverer. It is found in great abundance on the island below this city—a place perhaps more fertile in plants, than any other, of equal dimensions, in the United States.

The fact is now well established, that the culture of hemp offers a greater profit to the farmer, than if he should employ his time, his labour, and his field in any other manner

* See National Arithmetic, or Observations on the Finances of Massachusetts, chap. 5th.

† Tucker on Commerce.

‡ Chambers on Glass and Soap Making.

heretofore known—but if the Urtica has a finer and stronger fibre, and will produce more on a given portion of land, it will eventually supercede the hemp.

The soil best adapted to the Urtica is wet meadow land; and it will thrive in ground covered with water many months in the year. It grows also to advantage in a rich, moist, upland loom. It can be raised from the seed or root, as it is a hardy perennial. The seed should be planted in the spring, and the roots in the fall months. If the fibre is wanted for the finest fabrics, the plant should be cut while in full flower; but if only for common use, it will yield more by standing till completely ripe. After being cradled, which is the most proper way to cut it, the stalk should be suffered to lie on the ground some days, as the stinging quality which is peculiar to the growing nettle, is thus removed. The Urtica is rotted in the same manner as hemp, only it requires a longer time for the purpose: But it is not affected by the inclemency of the weather.

The legislature of this state at their last session incorporated a company for the manufacture of this plant, and the United States have granted a patent to Mr. Whitlow for its discovery.*

While on the subject of vegetable fibre, it is proper to mention the Asclepias† and the Apocynum Cannabinum, both of which grow very luxuriantly on the island in our neighborhood, already mentioned. The fibres of these plants are very strong and very numerous; and may, with little trouble, be converted to many domestic purposes. For coarse cordage or family cloth it can be used almost in the state in which it is taken from the stalk. The common Asclepias, or Milkweed, may be employed for

---

* For many interesting particulars respecting the cultivation of this valuable nettle, examine a paper published by the corporation of the city of New-York, and the Baltimore Medical and Philosophical Lyceum.

† Two new species of Asclepias were discovered in this state last summer by Mr. Whitlow, and a patent has been taken from the office for the manufacture of the staple.

the purposes just mentioned ; but there is a newly discovered species having much smaller leaves than the other, and growing nearly in the same plenty, which will be found to answer better.* The silk or cotton taken from the pods of the Asclepias when ripe, has been manufactured into hats, and has also been spun into yarn of which cloth has been made, which vies with silk in lustre.†

The advantages of introducing into this country the cultivation of the Vine have been frequently and strikingly exhibited. I shall only mention that a colony of enterprising Swiss, who settled in the Indiana Territory, have planted vineyards of the Bordeaux, Madeira and other grapes ; and they have sent from their wine presses last season large quantities of claret, not inferior to that imported from France. By an advertisement in a newspaper published at Cincinnati, in the state of Ohio, it appears that a merchant of that place has a large supply of this red wine for sale ; and that a quantity of Madeira is expected from the vineyards to which I have referred.‡ §

Though not critically proper in a discussion on botany, I may be allowed the liberty of introducing in this place a few observations on some colouring vegetables. The late discovery of the Zanthorrhiza tinctoria in the United States promises to be extensively useful. This shrub is found on the Alleghany ridge from Virginia to Georgia, and it probably may be found on most of the upland country. The extract or even decoction of the whole plant, forms a fine yellow dye, which may be varied by saturation or dilution, from the brightest straw colour to the deepest orange. In combination with indigo or most other blues, all the different shades of green may be produced. The stain which it makes on cloth is not apt to fade or wear off, and it may

---

* This Asclepias has been sent to Dr. Muhlenberg for a name.

† In France this cotton is known by the name of Virginia silk, and coverlets, stockings and gloves are made of it.

‡ See Columbian, by Albany Register, July 18th, 1813.

§ A new species of cluster gooseberry grows on the Alleghany ridge, which yields a wine nearly equal to that from the grape.

also be applied without using any mordant. Specimens of cloth dyed with the Zanthorrhiza were shewn to the society last winter. This plant also possesses many medical virtues.*

Isatis Tinctoria, or Woad, is well known as a blue, and still better as the basis of black. The colouring matter is obtained from the leaves. This plant can be raised here with little trouble, and in great abundance. In the neighborhood of this city there are some fields planted with it. The Isatis, in conjunction with the Zanthorrhiza, gives us the three principal dyes in colour making.

The Galium Tinctorium is also one of our native plants. It flourishes most in places sheltered from the sun, and where the ground is rather moist. This plant so nearly resembles the Madder (Rubia Tinctorium) in its botanical character, as well as in its colouring properties, that some writers have given it the name of Rubia Americana. The Galium is employed by the inhabitants of Jura, one of the Hebrides,† as a red dye, and it is perhaps equal to the rich red of the Rubia itself. Upon turning over the pages of our transactions, I find that the Galium has already received your attention and patronage.‡ The true Rubia was raised last summer at Pittsfield by Mr. E. Watson, who will, I understand, read you in the course of the winter a paper on this article. The Rubia has for a long time been raised in Connecticut, but only in gardens. I understand the Shakers have also planted it.§

---

* See Barton's Collections, part 2, ps. 11, 12, and 13.

† Encyclopædia Britannica, article Jura.

‡ Agricultural Trans. vol. 1st, p. 367.

§ The following directions for raising Madder, may be useful, they are copied from the Emporium of Arts, vol. 4th, No. 2, p. 325.

" This plant may be propogated either by offsets or seeds; if the latter method is preferred, the seed should be of the true Turkish kind, which is called *lizari* in the Levant. On a light thin soil the culture cannot be carried on to any degree of profit, that soil in which the plant delights is a rich sandy loam, being

The Cochineal plant (Cactus Cochinelifer) has been discovered in South-Carolina, where it can be cultivated to any extent. We may therefore reasonably hope that the invaluable dye extracted from the insect which gives this plant its name, and which always accompanies it, will speedily be numbered among our staple productions.†

The juice of the common Pokeberry (Phytolacca Decandra) has lately been added to the list of permanent vegetable dyes. Dr. Adam Seybert of Philadelphia, was the first who succeeded in fixing this colour, which can be changed from the brightest crimson to a red little inferior to scarlet. It is expected from the further discoveries which are likely

---

three feet or more in depth. The ground being first made smooth is divided into beds four feet wide, with alternate alleys, half as wide again as the beds; the reason of this extraordinary breadth of the alleys will appear presently. In each alley is to be a shallow channel for the convenience of irrigating the whole field, &c. that part of the alley which is not otherwise occupied may be sown with legumes.

"The Madder seed is sown broad cast in the proportion of from 25 to 30 lbs. per acre, about the end of April. In a fortnight or three weeks the young plants begin to appear, and from this time to the month of September, care must be taken to keep the ground well watered and free from weeds; if the plants are examined in autumn they will be found surrounded with small yellow offsets, at the depth of two inches; and early in September the earth from the alleys is to be dug out, and laid over the plants of madder to the heights of two or three feet, with this the first year's operation finishes. The second year's work begins in May, with giving the beds a thorough weeding, and care must be taken to supply them with plenty of water during the summer; in September the first crop of seed will be ripe, at which time the stems of the plants may be mown down, and the roots covered a few inches with earth taken as before out of the alleys. The weeding should take place as early as possible in the spring of the third year, and the crop, instead of being left for seed, may be cut three times during summer for green fodder, all kinds of cattle being remarkably fond of it. In October the roots are taken up, the offsets carefully separated and immediately used to form a new plantation, and the roots, after being dried, are sold, either without further preparation, or ground to a coarse powder and sprinkled with an alkaline ley. The roots lose four-fifths of their weight in drying, and the produce of an acre is about two thousand pounds weight of dry saleable madder."

† Archives of Knowl. vol. 1st, 257.

to be made on this colour, that the Cochineal which is so expensive, may be generally dispensed with.*

The Quercitron, a species of Oak, and native of this country only, has long been esteemed for producing a yellow dye. Dr. Bancroft, who first carried it to Europe, received a patent from the English government for its introduction there, and acquired a large fortune by the enterprise. The pulverised bark was the state in which the Quercitron was imported and used—But works are now erected at Fitchburgh, in Massachusetts, for obtaining the extract of the Quercitron, by a new process; which contains the virtues of the bark in substance in a very condensed state. One pound of this extract affords as much colouring matter as fifteen or twenty pounds of the pulverised bark.†

As we abound in Cryptogamic plants, I must not pass them wholly unnoticed when speaking of dyes. Both mosses and mushrooms have been made to produce, in union with other substances, beautiful colours of red and of violet hues. In Sweden they stain woollen cloth with their mosses.‡ In France the mountains of Auvergne supply a moss containing a colour little inferior to the splendid purple extracted from the Archil or Roella of the Canary Islands;§ and in the Highlands¶ of Scotland there are mosses found which yield the same beautiful tinctures. These examples ought to stimulate us to inquiries and investigations on these subjects, which probably would be rewarded with complete success.

The art of dyeing is in its second infancy; but we may hope that, like the fabled eagle of the ancients, this renewed youth will be only the precursor of a more vigorous maturity. The attention of a few scientific men to the subject would bid fair to realize the prospect. The ancients held

---

* See Aurora, October 5th, 1813.
† See Literary and Philos. Repos. for Nov. and Decem. 1812, p. 148.
‡ Kalm.
§ Encyclop. Britannica—Archil and Colour making, No. 49.
¶ Ibid. with Archil.

this art in the greatest estimation, and it is to be lamented that although we have increased the variety of colours, we are yet unable to give them that durability which they are known to have once possessed, and which forms their principal value. The mode of making the Tyrian dye or ancient royal purple, has been long lost. But if the cloth coloured by it could have been preserved, and what is told of it be true, the stain might have been as lasting as the story of its discovery.

The medicinal qualities of plants is an important and interesting subject of investigation, and it is surprising that the spirit of research and discovery, so remarkable in our countrymen, should not have been more operative on this subject. The flower which is now heedlessly trampled under foot, may possess virtues for the relief of many maladies, which, from our ignorance of its properties, we are unable to cure :—And when it is recollected that plants which differ widely from each other in habits of life, and in internal structure, have been found to produce the same results,* it may be confidently expected that a period will arrive when our own country will furnish us, with most of the medicines which are now imported. Already many plants which were noticed as desiderata for American cultivation, and† which twenty years ago were esteemed exotics, are now found growing in our fields and forests. The new and rapid improvements which are making in the Materia Medica, flatter us with a hope that Pharmacy will soon banish from her list, most of her mineral applications, those banes, too often, of the health and constitution, which like the Vampyres of Java, eventually destroy the blood, while they lull, in present security, the unsuspecting victim.

In this place I shall mention a few native medicinal plants, some of which have not been publicly noticed.

The Aristolochia Serpentaria, or Virginia Snake Root, to-

* Homberg produced the same principle from Cabbage as from Hemlock. Edin. Rev. No. 13.

† American Philos. Trans. vol. p. 325 to 380.

gether with many of the same species, have been long known among us as astringents and tonics. But a new plant, which may be called Serpentaria Alba, or white Snake Root, is much to be preferred to the others; as it possesses all their virtues in the highest degree. The farmers of New-Jersey esteem it greatly as a cure for the ague; and it abounds most in the vicinity of marshes, where the miasma which occasions this complaint prevails. But it is remarkable that a dry soil is required for its peculiar habit. The efficacy of the Serpentaria is said to be superior to the Cinchona, or Peruvian Bark in its febrifuge qualities. I cannot forbear just to notice here a witticism on this subject by Voltaire, whose reputation stands higher in matters of fancy, than in matters of fact, and who is commonly unhappy when he touches on a moral subject. He takes occasion in speaking of the Peruvian bark, to combat the idea that the bounty of Providence is apparent in providing a remedy for diseases in the neighborhoods which produce them. He observes, in his Philosophical Dictionary, that the Peruvian Bark is found, in one quarter of the globe, while the disease which it cures is discovered in another. But as the bark is used in many complaints, his remark is wholly irrelavent, unless he could have shewn that it was of no special benefit where discovered. Now if general and uncontradicted tradition is to be believed, the medical qualities of the Cinchona were first learned by observing certain animals, affected by intermittents, instinctively led to the plant itself, or to ponds of water impregnated with its juice.* Be this however as it may, we certainly find in the Serpentaria a new proof of the old doctrine, that the remedy is usually found on the spot which produces the disease.

The Maculata Virginiensis, a newly discovered plant, has been found a most efficacious remedy in epileptic affections, and for this purpose it is much employed by the Indians.

The Maranta Arundinacea, or Arrow Root, (called so by

* Darwin's Botanic Garden, P. 2, p. 60.

the Indians, who heal with its juice wounds inflicted by poisonous arrows) was formerly thought a native only of South America. But it is now discovered in the West-Indies and I believe in Georgia. It is highly valued as an antidote to animal poison. The bite of the Scolopendra or Centum Pes, which is almost as venomous as the sting of a scorpion, has often been cured by the application of the Maranta, which flourishes most where these noxious insects abound. It also effectually counteracts the fatal effects of the deadly nightshade (Atropa Belladona) which is perhaps the most powerful of the vegetable venoms. Six slaves in the West Indies swallowed some spirits from a bottle which had been stopped with the leaves of the deadly nightshade.—Four of them died shortly after, by the effects of the poison. The remaining two were saved by applying liberally the juice of the Maranta Arundinacea. The efficacy of this plant in removing the baneful consequences of the animal and vegetable poison, seems to indicate that the malignancy of mineral poison might also be opposed by its administration. The experiment is certainly worth a trial. The juice of the young plant is the antidote. The ferenaceous qualities of the arrow root when mature, are sufficiently known.

The bark of the White Walnut, or Butternut, has been used for the cure of bites from venomous serpents;* and an extract from it, made by simple boiling, is known to be among the best cathartic medicines. The Scutellaria, or Skull Cap, has lately obtained much reputation as a remedy, or preventure, of cannine madness. The authority on which many of the cures are believed to be real, cannot be questioned; and the frequent occurrence of the hydrophobia, during the summer months, entitle such a specific to much attention—The Sutellaria grows plentifully in this state, and it flowers in July and August.

The Seneka snake root (Polygala Senega) is found in the

---

*Barton's Collec. vol. 2, p. 23.

highlands between this place and Schoharie. The Indians are said to cure the bite of the Rattlesnake with this root, and they were perhaps first induced to use it, by the striking resemblance which it bears to the rattles of this dreadful animal. There is a great demand for it in medicine, and its discovery in our neighbourhood will be important.

The Delphinium Consolida, or common Larkspur, has been found to possess many useful qualities, and it may be used in some instances for the Digitalis Purpuria, or Foxglove,* a medicine in some cases indispensable; and the effects of which notwithstanding, on the vision, are equally distressing and wonderful. The imagination of the patient, also, both in his sleeping and wakeful hours, is powerfully affected by it.

> The headlong precipice that thwarts *the* flight,
> The trackless desert, the cold starless night,
> And stern-eyed *Murder* with his knife behind,
> In dread succession agonize the mind.

To relieve us from these consequences of the Digitalis, we have a hope in the Delphinium. A tincture made of the bruised seeds has been the mode of its preparation.†

The Columbo root was discovered in the western part of this state last summer, by Mr. Whitlow. Willdenow supposes it to belong to a species of the Bryonia. This however is doubtful. A technical name, it is known, will shortly be given to the plant. Its present appellation is from Columbo, a town in Ceylon from whence all India is supplied. It grows also in Africa,‡ and forms an important article of commerce with the Portuguese at Mozambique. Its use and importance in medicine is fully established, and it has hitherto been the subject of regret, that the irregularity attending its importation, has obliged practitioners often to exhibit it in a decayed state, owing to long keeping.

---

* See Medical Repos. Hex. III, vol. 2. p. 232, for a particular account of this important plant.

† See Dr. A. Blanchard's communication to the New-England Med. and Surg. Journal, vol. 2, p. 248.

‡ Duncan's Dispensatory, p. 203.

The Actæa Spicata, marked as peculiar to Britain in Donn's Catalogue, is found at the base of Schooley's mountain, and in many other places. The Actæa Racemosa and Alba are frequently met with. The berries of the Actæa Spicata are poisonous. Toads are said to resort to this plant, owing to some congenial effluvia they exhale from it. The vulgar antipathy to these animals may have arisen from this circumstance. The root of Actæa is the medicine.*

This short list of medicinal plants might be greatly enlarged ; but neither the limits nor the design of this address permit me farther to expatiate. I understand that Mr. Frederick Pursh, the botanist, who made one of the expedition up the Missouri under the command of the unfortunate Lewis, is about publishing in London, under a liberal patronage, a full account of the valuable and extensive additions which were then made to the Materia Medica. Another work, comprising the discoveries since that period, is contemplated in this country. These, with Dr. Barton's Collections, will furnish us with a tolerable view of the subject.

Respecting ornamental flowers, the properties of which have not yet been developed, I shall only say, that the florist would find, in many of our wild plants, colours richer and more numerous, and fragrance more delightful, than in many which have already been introduced into the hot house and garden.

I conclude with recommending the employment of a skilful botanist to explore the unfrequented parts of our state, and particularly those portions of it considered unhealthy ; as a greater number of plants, and those of the most useful kind, are found in such places, than elsewhere. Tours of this nature are by no means unfrequent, and while Americans have neglected the botanical examination of their country, foreigners have immortalised themselves by doing it. From England we have had Raleigh and Catesby, Fra-

* Donn's Hortus Cantabrigiensis, p. 100.

sier, Squibb, Lewis, and Walter; from Sweden, Professor Kalm, a pupil of Linnæus and collector for him; from Germany, Fursling and Pursh; France has sent us Michaux and Volney, and Prussia, Baron Humboldt and King. To these indeed many other names might be added; but among them all there is not one of our own countrymen—no one who has received our patronage or encouragement. If you are unwilling to engage a botanist for this purpose, let every member who is at all acquainted with the subject, engage to occupy himself in multiplying the number of local Floras; and we may thus, perhaps, obtain the vegetable contents of the state. Should this plan be adopted, each individual engaging should undertake to survey a district contiguous to his residence, with special and minute investigation. The nomenclature and classification of the vegetable tribes are now reduced to such a systematic form, that any discovery may be registered with the greatest ease and precision. If this method should be pursued with industry and skill, we might soon reverse, in regard to this region of our country, the position of the poet, and say

Not "many a flower is born to blush unseen,
And waste its sweetness on the desert air."

Catalogue of Plants

INDIGENOUS TO THE

STATE OF NEW-YORK.

Communicated to the Society, February 23d, 1814.

PREFACE.

THE following Catalogue includes only the plants, which have been collected by Messrs. Le Conte, Pursh, Eddy, Whitlow, Edmonston, Beck, and myself—it might have been enlarged by the addition of some other genera and species which have been naturalized and now grow spontaneously —but I thought it would be more proper to confine the list to those which are indigenous. It will be found that but a very few of the Cryptogamous tribes are here inserted—on some future occasion it is proposed to treat of this class more at large.

Where I have been unable to find in the lists already published, an English name for the Latin Systematick name, I have supplied it. Many inaccuracies will no doubt be found in the present catalogue, but it is hoped they are such as may be easily rectified by the botanist.

JACOB GREEN.

ABBREVIATIONS.

Ait.	Aiton.
Auct.	Auctores
Bartr.	Bartram.
Curt.	Curtis.
Cav.	Cavinille.
Desf.	Desfontaines.
Don.	Donn.
Ehrt.	Ehrhardt.
Ed.	Eddy.
Fras.	Fraser.
Frœl.	Frœlich
Gært.	Gærtner.
Hedw.	Hedwig.
H. P.	Hortus Parisiensis.
Le Con.	Le Conte.
L.	Linnæus.
Lmk.	Lamarck.
l'Her.	l'Heritier.
Lys.	Lyons.
Mich.	Michaux.
Mich. f.	Michaux filius.
Mœnch.	Mœnchausen.
Muhl.	Muhlenberg.
Pers.	Persoon.
Sal.	Salisbury.
Swz.	Swartz.
Walt.	Walter.
Waug.	Waugenheim.
Willd.	Willdenow.
N. S.	New Species.
Var.	Variety.

CATALOGUE, &c.

Scientific Name.	*English Name.*
ACER	MAPLE
1 coccineum	1 scarlet
2 dasycarpum *Ehrt.*	2 silver leaved (white)
3 flavum. N. S.	3 yellow
4 montanum	4 mountain
5 negundo	5 ash leaved (box elder)
6 rubrum	6 scarlet, white, red, soft
7 saccharinum	7 sugar maple
8 striatum	8 striped maple } moose-wood }
9 do. *Var.*	
ACHILLÆA	YARROW
millefolium	milfoil
ACORUS	SWEET FLAG
calamus	common } aromatic. *calamus* }
ACTÆA	BANE BERRY
1 americana *N. S.*	1 American
2 ———alba.	2 white
3 cœrulea	3 blue
4 racemosa	4 black snake root
5 rubra	5 red
6 spicata	6 common, *coral and pearl*
ADIANTUM	MAIDEN HAIR
pedatum	Canadian
ADONIS	ADONIS
autumnalis	autumnal } pheasant's eye }
AGARICUS	AGARICUS
campestris	
AGRIMONIA	AGRIMONY
eupatoria *Var.*	common
AGROSTEMMA	ROSE CAMPION
githago } githago segetum *Desf.* }	corn cockle

AGROSTIS	BENT GRASS
1 decumbens	1 creeping
2 filiformis	2 thread-form
3 stricta	3 upright
4 stolonifera	4 fiorin grass
AIRA	HAIR GRASS
1 melicoides *Mich.*	1 melic like
2 obtusata *Mich.*	2 blunt
ALETRIS	ALETRIS
1 farinosa } alba *Mich.* }	1 mealy; *Devil's bit, star grass* }
2 aurea *Mich.*	2 yellow flowered
ALISMA	WATER PLANTAIN
plantago	common
ALLIUM	ONION GARLICK
1 canadense	1 wild, or American
2 cernuum	2 mountain garlick
3 tricoccum	3 broad leaved, three seeded
ALNUS	ALDER
1 incana (glauca)	1 hoary leaved (glaucous)
2 serrulata	2 common American
ALSINE	CHICKWEED
media	common
AMARANTHUS	AMARANTH, or *Cock's comb*
1 lividus	1 lead coloured
2 oleraceus	2 cultivated
AMPELOPSIS	FALSE GRAPE, or *American joy*
1 hirsuta *Lys.*	1 hairy
2 quinquefolia hedera quinquefolia. *L* cissus hederacea *Pers.*	2 five leaved wild ivy
ANAGALLIS	PIMPERNEL, or *Chick-weed*
arvensis	common
ANCHUSA	BUGLOSS
1 canescens } batschia *Mich.* }	1 soft
2 Virginica	2 smooth
ANDROMEDA	ANDROMEDA
1 calyculata *Var.*	1 box leaved
2 ferruginea	2 ferrugineous
3 mariana *Var.*	3 oval leaved
4 paniculata *Var.*	4 panicled
5 polifolia *Var.*	5 rosemary leaved
6 salicifolia *N. S.*	6 willow leaved
7 strigosa *N. S.*	7 slender

8 racemosa	8 cluster flowered, sweet scented
ANDROPOGON	BEARD GRASS
1 scoparium *Mich.*	1 broom
2 virginicum.	2 yellow broom grass
ANDRYALA	ANDRYALA
sinuata	crooked
ANEMONE	ANEMONE
1 dichotoma	1 wolf's bane leaved
2 hepatica, *obtusa.*	2 hepatica, *liver wort*
3 parviflora	3 small flowered
4 pennsylvanica	4 Pennsylvanian
5 quinquefolia	5 five leaved
6 thalictroides thalictrum anemonoides *Mich.*	6 meadow-rue leaved
7 virginiana	7 Virginian
ANETHUM	FENNEL
fœniculum	sweet
ANGELICA	ANGELICA
1 atropurpurea	1 purple
2 hirsuta triquinata	2 downy
ANTHEMIS	CHAMOMILE
cotula	stinking—*May weed*
ANTHOXANTHUM	VERNAL GRASS
odoratum	sweet scented
ANTIRRHINUM	SNAP DRAGON
1 canadense	1 Canadian
2 linaria vulgaris	2 common toad flax
APOCYNUM	DOG'S BANE
1 androsæmifolium	1 tutsan leaved
2 cannabinum	2 Indian hemp
3 hypericifolium	3 hypericum leaved
AQUILEGIA	COLUMBINE
canadensis	scarlet or wild
ARABIS	WALL CRESS, *or turkey pod*
1 bulbosa	1 tuberous
2 canadensis falcata *Mich.*	2 Canadian or sickle podded.
3 hispida	3 hispid or Welch
4 lyrata	4 lyre leaved
5 spathulata	5 palm leaved
6 thaliana	6 common or mouse ear
ARALIA	ARALIA
1 hispida	1 bristly
2 nudicaulis	2 wild sarsaparilla
3 racemosa	3 berry bearing spikenard

ARBUTUS	STRAWBERRY TREE
uva ursi *Amer.*	bearberry
ARCTIUM	BURDOCK
lappa	common
ARENARIA	SANDWORT
1 divaricata *Mich.*	1 severed
2 lateriflora	2 lateral flowered
3 rubra canadensis *Pers.*	3 red or field
4 stricta	4 upright
ARETHUSA	ARETHUSA
1 bulbosa	1 bulbous
2 nutans	2 nodding
3 ophioglossoides	3 adder's tongue leaved
4 pendula	4 pendant
5 stellata	5 starry
6 verticillata	6 whorl leaved
ARGOLASIA	LOOKING GLASS PLANT
aurea *N. S.* heritiera tinct.	shining
ARISTOLOCHIA	BIRTH WORT, *snake root*
1 serpentaria	1 Virginian
2 sipho	2 broad leaved
ARUM	INDIAN TURNEP
triphyllum *Var. Purp.*	three leaved
ARUNDO	REED GRASS
epigejos	small
ASARUM	SNAKE ROOT
canadense	white—*wild ginger*
ASCLEPIAS	SWALLOW WORT, *milk*
1 amœna *N. S.*	1 oval leaved [*weed*
2 cinera *Walt.*	2 artichoke leaved
3 debilis *Mich. Aff. Nivea Dill.*	3 white
4 exaltata acuminata	4 poke leaved
5 grandiflorum	5 large flowering
6 incarnata	6 flesh coloured
7 longifolia	7 long leaved
8 obtusifolia	8 obtuse leaved
9 pulchra	9 hairy, river
10 purpurascens	10 purple
11 quadrifolia	11 four leaved
12 syriaca	12 common silk plant
13 tuberosa decumbens	13 pleurisy root—*butterfly weed*

14 variegata *N. S.* ?	14 variegated
15 verticillata	15 whorl leaved
ASCYRUM	ANDREW'S CROSS
1 amplexicaule	1 stem clasping
2 crux andreæ	2 common
3 hypericoides	3 hypericum like
4 multicaule *Mich.*	4 many stemmed
5 stans *Mich.*	5 upright
ASPARAGUS	ASPARAGUS
officinalis	common
ASPIDIUM	ASPIDIUM
1 acrotichoides	1 ———
2 ebenum	2 *ebony*
3 filix fæmina	3 *brake*
4 marginale	4 marginal
5 tenue	5 slender
ASPLENIUM	SPLEEN WORT
1 ebenum	1 *ebony*
2 melanocaulon	2 *ruff stemmed*
3 rhizophyllum	3 ———
4 ruta *muraria L.*	4 wall rue
5 trichomanes	5 maiden hair
6 trichomanoides. *Mich.*	6 five leaved
ASTER	STAR WORT
1 amplexicaulis	1 stem clasping
2 conyzoides	2 flea bane
3 cordifolius	3 heart leaved
4 corymbosus	4 clustered
5 infirmis *Mich.* *cornifolius Willd.*	5 weak
6 latifolius	6 broad leaved
7 linarifolius	7 savoury or toad flax leaved
8 miser	8 small flowered (white)
9 novæ angliæ	9 New-England
10 novi belgii	10 glaucous or green, New Holland
11 paniculatus *N. S.*	11 panicled
12 rigidus	12 stiff leaved
13 salsuginosus *N. S.*	13 ———
14 silphioides *N. S.*	14 ———
15 solidaginoides *Mich.*	15 solidago like, golden rod
16 spurius	16 spurious
17 undulatus	17 waved leaved
ASTRAGALUS	MILK VETCH
1 canadensis	1 woolly or Canadian

2 caroliniamus	2 Carolina
ATRAGENE	ATRAGENE
americana *Muhl.*	American
AVENA	OAT GRASS, OATS
1 pennsylvanica	1 Pennsylvania
2 spicata *glumosa* Mich.	2 spiked
3 elatior	3 tall
AZALEA	ROSE BAY
1 canescens *N. S.*	1 grey downy
2 canescens marginata. *N. S.*	2
3 glauca	3 glaucous leaved
4 nitida *N. S.*	4 shining
5 nudiflora *Var.*	5 naked red flowered
6 microcarpa *N. S.*	6
7 procera *N. S.*	7 tall
8 racemosa.	8 branching
9 viscosa *Var.*	9 viscous
BARTRAMIA	BARTRAMIA
BARTSIA	BARTSIA
1 coccinea	1 scarlet
Var. lutea	yellow
2 pallida	2 pale
BERBERIS	BERBERRY
canadensis vulgaris L.	Canadian or common American
BETULA	BIRCH
1 glandulosa *Mich.*	1 glandulous
2 lutea *Mich.*	2 yellow
3 nigra (rubra lanulosa) *Mich.*	3 sweet scented, red beech
4 pumila	4 dwarf hairy
5 tremula	5 quivering
BIDENS	MARYGOLD
1 cernua	1 nodding burr
2 connata *Mich.*	2 marsh
3 chrysanthemoides *Mich.*	3 large flowered
BLITUM	STRAWBERRY BLITE
1 capitatum	1 common
2 virgatum	2 slender stalked
BŒHMERIA	BŒHMERIA
cylindrica	cylindrical
BOLETUS	BOLETUS
tuberosus	tuberous

BOTRYPUS	HEMLOCK FERN
lunaroides *N. S.*	kidney leaved
BRIZA	QUAKING GRASS
maxima	large
BROMUS	BROME GRASS
1 canadensis *Mich.*	1 Canadian
2 mollis	2 soft
BRACHYSTEMUM	BRACHYSTEMUM
virginicum *Mich.*	flax leaved or Virginian
linifolium *Willd.*	
BUPHTHALMUM	OX-EYE
helianthoides *l'Her.*	smooth
helianthus lævis L.	
heliopsis lævis *Pers.*	
BUCHNERA	BUCHNERA
americana	American
CACTUS	INDIAN FIG, *Cactus*
opuntia	common
CALENDULA	POT MARYGOLD
officinalis	common
CALLA	CALLA
palustris *N. S.*	marsh
Var. denticulata	*Var.* notched
CALLICARPA	CALLICARPA
americana	sage leaved
CALTHA	MARSH MARYGOLD
1 dentata	1 gaged
2 palustris	2 common
CAMPANULA	BELL FLOWER
1 acuminata	1 pointed
2 americana	2 American
3 nitida	3 shining
4 perfoliata amplexicaulis *Mich.*	4 perfoliate
5 rotundifolia	5 round leaved
CARDAMINE	LADY'S SMOCK
1 hirsuta	1 hairy
2 pennsylvanica	2 Pennsylvania water cress
3 virginica	3 Virginian
CARDUUS	THISTLE
1 horridulus	1 thorny
2 marianus	2 milk
3 pectinatus	3 pectinated

CAREX	SEG, or SEDGE
1 crinata	1 chaffy
2 hystericina	2 porcupine
3 leporina	3 hare
4 muricata	4 prickly
5 pedunculata	5 long stalked
6 rostrata	6 beaked
7 vulpina	7 great fox
CARPINUS	HORN BEAM TREE
1 americana *Willd.*	1 American
2 ostrya	2 hop
CASSIA	CASSIA
1 chamæcrista	1 dwarf (partridge pea)
2 discolor *Don.*	2 two coloured
3 fasciculata *Mich.*	3 bundled
4 marilandica	4 wild senna (false acacia)
5 nictitans	5 nodding
CASTANEA vesca, americana *Gært.*	CHESNUT common American
CAULOPHYLLUM *N. S.*	CAULOPHYLLUM
CEANOTHUS americanus ——— *Var.*	TEA TREE common New-Jersey
CELASTRUS	STAFF TREE
1 bullatus	1 scarlet fruited
2 scandens	2 climbing (bitter sweet)
CELTIS occidentalis	NETTLE TREE common American
CENCHRUS echinatus	HEDGE HOG GRASS rough seeded
CENTAUREA	CENTAURY
1 benedicta	1 blessed thistle
2 calcitrapa	2 star thistle
3 cyanus	3 blue bottle
4 jacea	4 knap weed
CEPHALANTHUS occidentalis	BUTTON WOOD American
CERASTIUM	CHICK WEED
1 arvense	1 corn pink, mouse ear
2 semidecandrum	2 least
3 viscosum	3 clammy
CERCIS canadensis	JUDAS TREE or *Red Bud* American
CHELIDONIUM majus	CELANDINE common, greater

CHELONE	HUMMING BIRD TREE
glabra	white
CHENOPODIUM	GOOSE FOOT
1 album	1 common lamb's quarters
2 glaucum	2 glaucous
3 incanum	3 hoary
4 hybridum	4 tufted
5 maritimum	5 sea
CHIRONIA	CHIRONIA
1 angularis	1 angular stemmed (American centaury)
2 chloroides	2 many petal'd, chlora like
3 campanulata	3 bell flowered
4 chronantha *N. S.*	4 ———
5 pulchella	5 dwarf
CHRYSANTHEMUM	CHRYSANTHEMUM
leucanthemum	ox eye daisy
CICHORIUM	SUCCORY
CICUTA	COW BANE
1 bulbifera	1 bulb bearing
2 maculata	2 American spotted
CIMICIFUGA	BUG WORT
1 americana	1 stinking
2 serpentaria	2 ———
CINNA	CINNA
arundinacea	reedy
CIRCÆA	NIGHT SHADE
1 alpina	1 mountain enchanter's
2 canadensis } lutetiana }	2 common
CISTUS	CISTUS or ROCK ROSE
canadensis	Canada
CLAYTONIA	CLAYTONIA
virginica	Virginian
CLAVARIA	CLAVARIA
coralloides	coral like
CLEMATIS	VIRGIN'S BOWER
1 virginica	1 Virginian
2 ——— *N. S.*	2 ———
CLEOME	BASE MUSTARD
dodecandra	clammy
CLETHRA	CLETHRA
1 alnifolia	1 smooth alder leaved
2 do *Var.*	2 ———
CLIMACIUM	CLIMACIUM
dendroides	———

CNICUS	THISTLE
arvensis	Canada
COLLINSONIA	COLLINSONIA
canadensis	common *(horse balm)*
COMPTONIA	COMPTONIA
1 albida	1 whitish
2 asplenifolia *l'Her.* liquidambar asplenifolium *L.*	2 sweet fern
CONIUM	HEMLOCK
maculatum	common
CONVALLARIA	SOLOMON'S SEAL
1 bifolia	1 two leaved, small
2 maialis	2 common lily of the valley
3 multiflora	3 many flowered
4 polygonatum	4 common
5 pubescens	5 hairy
6 racemosa	6 cluster flowered
7 stellata streptopus *Mich.*	7 star flowered
8 trifolia	8 three leaved
9 umbellata	9 umbelliferous
CONVOLVULUS	BIND WEED
1 arvensis	1 small *(field corn)*
2 panduratus	2 fiddle leaved *(wild potatoe)*
3 purpureus	3 great purple
4 repens	4 creeping
5 sagitifolius *Mich.*	5 arrow leaved
6 sepium	6 hedge *(great bearbind)*
7 spithameus	7 dwarf
CONYZA	FLEA BANE
marilandica *Mich.* erigeron camphoratum L.	marsh
COREOPSIS	SUN FLOWER
1 alternifolia	1 alternate leaved tick seed
2 verticillata	2 whorl leaved
CORNUS	DOG WOOD
1 alba	1 white berry
2 alternifolia	2 alternate leaved
3 canadensis	3 Canadian
4 circinata *l'Her.* tomentulosa *Mich.*	4 hairy
5 florida	5 common
6 paniculata	6 paniculated

7 sanguinea	7 bloody
8 sericea *l'Her.* cœrulea *Lmk.*	8 blue berried
9 stolonifera *l'Her.*	9 creeping
10 stricta *l'Her.*	10 upright
11 *N. S.*	11
CORYDALIS	CORYDALIS
1 fungosa	1 spungy flowered
2 rosea	2 rose coloured
CORYLUS	HAZLE NUT
1 americana	1 American common *(filbert)*
2 avellana	2 European common
3 humilis	3 dwarf
4 rostrata	4 cuckold hazle
5 *N. S. Catskill.*	5 ———
CRATÆGUS	HAWTHORN
1 coccinea	1 scarlet fruited
2 cordata *Ait.*	2 maple leaved
3 crus gali	3 cock spur
4 eliptica	4 oval leaved
5 flava	5 yellow fruited
6 glaudulosa	6 hollow leaved
7 parvifolia	7 small leaved
8 punctata leucophleos *Mœnch.*	8 large fruited
9 pyrifolia *Ait.*	9 pear leaved
10 sphathulata	10 spatula leaved
11 viridis	11 green fruited
CROTOLARIA	CROTOLARIA
1 parviflora	1 small flowered
2 sagitalis	2 arrow leaved
CUCUBALUS	CAMPION
stellatus	four leaved
CUNILA	CUNILA
1 mariana	1 mint leaved
2 pulegioides hedeoma pulegioides *Pers.*	2 penny royal leaved
CUPRESSUS	CYPRESS TREE
thuyoides	white cedar
CUSCUTA	DODDER
americana	American
CYCLAMEN	CYCLAMEN, or *sow bread*
americanum	American

CYMBIDIUM
1 odontorrhyzon
2 pulchellum *Willd.*
angustifolium

CYNOGLOSSUM
officinale

CYPERUS
1 compressus
2 flavescens
3 inflexus
4 parviflorus
5 phymatodes *N. S.*
6 strigosus

CYPRIPEDIUM
1 acaule *Ait.*
humile *Mich.*
2 candidum
3 parviflorum
4 pubescens *Mich.*
5 spectabile *Sal.*
canadense *Mich.*
album *Ait.*
6 *N. S.*

DALIBARDA
1 fragarioides
2 repens

DATURA
1 stramonium
2 tatula

DENTARIA
1 diphylla
2 laciniata

DIAPENSIA
lapponica

DIERVILLA
1 americana *N. S.*
2 humilis
3 lutea
4 montana? *N. S.*
5 canadensis
6 *N. S.*

DIOSCOREA
paniculata *Mich.*
villosa *L.*

CYMBIDIUM
1 large tooth rooted
2 beautiful tuberous

HOUND'S TONGUE
common

CYPERUS GALINGALE
1 flat stemmed *(sedge)*
2 yellow
3 fragrant
4 small flowered
5 tuberous
6 rough bristle spiked

LADY'S SLIPPER
1 stemless dwarf
2 white
3 small flowered
4 hairy American yellow
5 shewy tall white flowered
6 *N. S.*

DALIBARDA
1 three leaved
2 heart leaved

THORN APPLE
1 common *(Jamestown weed)*
2 blue

TOOTH WORT
1 two leaved *(coral wort)*
2 jagged leaved

DIAPENSIA
northern

DIERVILLA
1 American
2 dwarf
3 marsh
4 mountain
5 yellow flowered
6 *N. S.*

YAM
American

DIPSACUS
sylvestris
DIRCA
palustris
DOLICHOS
2 sphærosphermus } phaseolus *L.* }
DRABA
verna
DRACŒNA
borealis
DRACONTIUM
fœtidum
DROSERA
1 americana *Willd.*
2 filiformis *N. S.*
3 rotundifolia
4 spathulata *N. S.*

ECHIUM
1 americanum *N. S.*
2 vulgare
ELYMUS
canadensis
EPIGÆA
repens
EPILOBIUM
1 coloratum
2 lævigatum
3 lineare oliganthum *Mich.* }
4 spicatum *Lmk.*
5 strictum
ERIGERON
1 bellidifolium *Mich.* } pulchellum *Mich.* }
2 canadense
3 heterophyllum *Muhl.* } aster aunnus *L.* }
4 philadelphicum } do. purpureum }
5 strigosum
ERIOCAULON
gnaphalioides *Mich.*

TEASEL
wild
LEATHER WOOD
marsh *(moose wood)*
DOLICHOS
1 purple
2 round seeded
WHITLOW GRASS
spring
DRACÆNA
oval leaved
DRAGON
skunk weed
SUN DEW
1 American long leaved
2 hairy
3 round leaved
4 spathulated

BUGLOSS
1 American vipers
2 common
LIME GRASS
Canadian
EPIGÆA
creeping *(pigeon berry)*
WILLOW HERB
1 coloured
2 smooth
3 linear leaved
4 narrow leaved
5 upright (soft)
ERIGERON *(flea bane)*
1 Robert's plantain
2 annual
3 various leaved
4 Philadelphian
5 bristled
PIPE WORT
short leaved

ERIOPHORUM	COTTON GRASS
1 angustifolium	1 narrow leaved
2 hudsonianum	2 Hudson's Bay
3 polystachion	3 common many headed
4 virginicum	4 Virginian
ERYTHRONIUM	DOG'S TOOTH VIOLET
1 americanum luteum et album	1 American yellow and white
2 dens canis	2 common
EUONYMUS	SPINDLE TREE
atropurpureus *Ait.*	purple
EUPATORIUM	EUPATORIUM
1 ageratoides *Willd.*	1 nettle leaved *(hemp seed)*
2 ceanothifolium	2 ceanothus leaved
3 cælestinum	3 blue flowered
4 coronopifolium *Willd.*	4 buck's horn leaved
5 hyssopifolium	5 hyssop leaved
6 lanceolatum	6 spear leaved
7 maculatum	7 spotted stalked
8 melissoides	8 balm leaved
9 perfoliatum	9 bonesett *(thorough wort)*
10 pubescens	10 hairy
11 purpureum	11 purple stalked
12 punctatum	12 dotted
13 rotundifolum	13 round leaved
14 sessilifolium	14 sessile leaved
15 trifoliatum	15 three leaved
16 verticillatum *Muhl.* trifoliatum *L.*	16 whorl leaved
EUPHORBIA	SPURGE
1 ipecacuanha	1 ipecacuanha
2 maculata	2 spotted
3 polygonifolia	3 knotgrass leaved
FAGUS	BEECH
1 carpinifolia	1 hornbeam leaved
2 ferruginea	2 rusty leaved
3 sylvestris	3 common
FESTUCA	FESCUE GRASS
clandestina	hidden flowered
FRAGARIA	STRAWBERRY
1 palustus	1 marsh
2 vesca	2 common garden
3 virginiana *Ehrt.*	3 wild
FRASERA	FRASERA
1 verticillata	1 pyramid flowered

2 waltheri	2 Walter's
FRAXINUS	ASH
1 concolor	1 red green
2 discolor	2 two coloured
A. americana	white
B. juglandifolia	walnut leaved
3 platyacarpa *Mich.*	3 Carolinian broad fruited
4 pubescens	4 hairy
5 sambucifolia *Mich.*	5 black elder leaved
FUCUS	FUCUS
vesiculosus	vesiculosus
FUMARIA	FUMITORY
1 glauca *Curt.* sempervirens L. corydalis sempervirens *Mich.*	1 glaucous
2 formosa	2 beautiful
3 *N. S.*	3 *N. S.*
GALACTIA	GALACTIA
ervum volubile *Walt.* gabella *Mich.*	smooth
GALEGA	GOAT'S RUE
virginica	Virginia two coloured
GALIUM	LADIES' BED STRAW
1 aparine	1 common
2 bermudianum	2 Bermudian
3 brachiatum circæzans *Mich.*	3 cross branched
4 cuspidatum	4 spit pointed
5 pennsylvanicum *Willd.*	5 Pennsylvanian
6 pilosum puncticulosum *Mich.*	6 hairy
7 tinctorium	7 dyer's
8 trifidum claytoni *Mich.*	8 trifid
GAULTHERIA	GAULTHERIA
1 hispidula	1 hispia
2 procumbens	2 mountain tea winter green
GENTIANA	GENTIAN
1 amarelloides *Mich.* quinqueflora L.	1 five leaved
2 angustifolia *Mich.*	2 narrow leaved
3 crinita *Fræl.*	3 fringe flowered
4 saponaria L.	4 soap wort

5 ochroleuca saponaria *Mich.*	5 pale white
6 linearis	6 linear leaved
7 villosa	7 villous
GERANIUM	GERANIUM *(crane's bill)*
1 carolinianum	1 Carolina
Var. album	white flowered
Var. incarnatum	red flowered
2 centaureum	2 centaury
Var. hirsutum	rough
3 columbinum	3 long stalked
4 maculatum	4 spotted *(crowfoot)*
5 pusillum	5 small flowered
6 robertianum	6 herb Robert
GERARDIA	GIERARDIA
1 erecta	1 upright
2 flava	2 yellow
3 glauca *Ed.*	3 glaucous
4 pedicularia	4 louse wort leaved
5 purpurea	5 purple
6 tenuifolia	6 fine leaved
7 villosa heterophylla	7 hairy
GEUM	AVENS *(herb Bennet)*
1 album	1 white
2 floridum	2 flowery
3 hirsutum	3 rough hairy
4 rivale	4 water
5 strictum *Ait.*	5 upright
6 virginianum	6 Virginian
GLECHOMA	GROUND IVY
hederacea	common
GLYCINE	GLYCINE
1 apios	1 tuberous
2 comosa	2 close flowered
monoica	3 pea vine
Var. alba	white flowered
Var. cæreulea	blue flowered
4 umbellata	4 umbelled
GNAPHALIUM	CUDWEED *(mouse ear)*
1 dioicum	1 dioicous
2 margaritaceum	2 pearly everlasting
3 plantagineum	3 plantain leaved
4 uliginosum	4 bundled
GRATIOLA	HYSSOP
virginica	Virginian hedge

HAMAMELIS	WITCH HAZEL
virginica	common
HEDYSARUM	HEDYSARUM
1 canadense	1 Canadian
2 canescens	2 rough leaved
3 cuspidatum bracteosum *Mich.*	3 sharp pointed
4 divergens	4 spreading
5 frutescens lespedeza capitata *Mich.*	5 shrubby
6 glabellum	6 bare
7 glutinosum	7 clammy
8 hirtum polystachia *Mich.*	8 many spiked
9 nudicaulis	9 naked stalked
10 obtusum	10 blunt leaved
11 marilandicum	11 Maryland
12 nudiflorum	12 naked flowered
13 paniculatum	13 panicled
14 prostratum procumbens *Mich.*	14 trailing
15 reticulatum sessilifolium *Mich.*	15 nettled leaved
16 rotundifolium *Mich.* canescens *Willd.*	16 round leaved
17 violaceum	17 violet flowered
18 viridifolium	18 green flowered
19 ——— *N. S.*	19 *N. S.*
HELENIUM	HELENIUM
autumnale	smooth
HELIANTHUS	SUN FLOWER
1 altissimus	1 tall
2 angustifolius	2 narrow leaved
3 decapetalus	3 ten petaled
4 divaricatus	4 branching
5 frondosus	5 leafy
6 giganteus	6 gigantick
7 mollis	7 soft
8 multiflorus	8 many flowered
HELLEBORUS	HELLEBORE
1 fætidus	1 bear's foot
2 trifoliatus	2 three leaved, *gold thread*
3 viridis *Ait.*	3 green
HELONIAS	HELONIAS
1 angustifolia	1 narrow leaved

see Lespedeza

2 asphodeloides xerophyllum *Mich.*	2 grass leaved
HEUCHERA	HEUCHERA
americana cortusa *Mich.*	purple flowered
HUBISCUS	HIBISCUS
1 manihot	1 palmated
2 moscheutos	2 poplar leaved
3 palustis	3 marsh
4 riparius *Pers.* militaris *Cav.*	4 smooth
5 virginicus *Walt.*	5 river
HIERACIUM	HAWKWEED
1 gronovii	1 Gronovius'
2 marianum *Willd.* scabrum *Mich.*	2 rough
3 paniculatum	3 panicled
4 venosum	4 veiny leaved
5 ——— *N. S.*	5 *N. S.*
HIPPOPHAÆ	SEA BUCKTHORN
canadensis	Canada, oval leaved
HIPPURIS	MARE'S TAIL
vulgaris	common
HOLOSTEUM	CHICKWEED
succulentum	succulent
HOTTONIA	WATER VIOLET
palustris	marsh
HOUSTONIA	HOUSTONIA
1 cœrulea	1 blue
2 longifolia	2 long leaved
3 purpurea	3 red
HUDSONIA	HUDSONIA
ericoides	heath
HYDRASTIS	YELLOW ROOT
canadensis	Canada
HYDNUM	HYDRIUM
imbricatum	imbricated
HYDROPELTIS	HYDROPELTIS
purpurea *Mich.*	purple
HYDROPHYLLUM	WATER LEAF
1 scabrum *Muhl.*	1 rough
2 virginicum	2 Virginian
HYPERICUM	JOHN'S WORT
1 ascyroides macrocarpon *Mich.* bartramicum	1 large capsuled

2 canadense	2 Canadian
3 elatum *Ait.*	3 tall
4 perforatum	4 common, perforated
5 procumbens	5 procumbent
6 denticulatum *Walt.*	6 notched
7 pyrimidatum amplexicaule *Lmk.*	7 stem clasping
8 rosmarinifolium *Lmk.*	8 ———
9 virginicum	9 Virginian
10 ——— *N. S.*	10 *N. S*
HYPOXIS	STAR-FLOWER
1 erecta	1 upright bastard
2 juncea	2 rush leaved
ILEX	HOLLY
1 aquifolium	1 common
2 canadensis *Mich.* prunifolia	2 Canadian
3 opaca *Ait.*	3 Carolinian
IMBRICARIA	IMBRICARIA
convexicaulis	convex stalked
IMPATIENS	BALSAM
1 maculata	1 spotted
2 noli tangere	2 touch me not
INULA	ELECAMPANE
1 helenium	1 common
2 linearis *N. S.*	2 linear
IRIS	FLAG *(flower de luce)*
1 cristata	1 crested
2 versicolor	2 many coloured
3 *Var. Major.*	3 large
4 virginica versicolor *Auct.*	4 Virginian
5 ——— *N. S.* ———	5 *N. S.*
6 ——— *N. S. LeCon.*	6 *N. S.*
IVA	IVA *(bastard Jesuit's bark)*
frutescens	shrubby
JUGLANS	WALNUT *or hickory*
1 alba tomentosa *Mich.*	1 white heart
2 amara *Mich.*	2 bitter
3 compressa *Gært.* alba *Mich.* squamosa *Mich. f.*	3 shell bark

4 *Spec.* microcarpa	4 common
5 cinerea ——— cathartica *Mich. f.*	5 butternut *(white)*
6 hybrida *N. S.*	6 hybrid
7 nigra	7 black
8 *Spec.* oblonga glabra *Muhl.*	8 oblong
9 porcina *Mich. f.*	9 pignut
10 regia	10 common, royal
JUNCUS	RUSH GRASS
1 effusus	1 soft
2 bulbosus	2 bulbous, round fruited
3 marginatus	3 marginated
4 melanocarpus	4 black fruited
5 echinatus polycephalus *Mich.*	5 many headed
6 nodosus	6 knotty
7 setaceus	7 bristly
8 squarrosus	8 moss or goose corn
9 sylvaticus	9 wood
JUNIPERUS	JUNIPER *or cedar*
1 communis repens *Don.*	1 common
2 prostrata	2 creeping
3 virginiana	3 red
KALMIA	KALMIA *or laurel*
1 angustifolia	1 narrow leaved
2 ——— *Var.*	2 ———
3 glauca *Ait.*	3 glaucous
4 latifolia	4 broad leaved
5 rosmarinifolia *N. S.*	5 rosemary leaved
LACTUCA	LETTUCE
elongata *Muhl.*	narrow leaved
LAMIUM	NETTLE *(Henbit)*
1 amplexicaule	1 common dead
2 purpureum	2 purple
LAURUS	BAY TREE *or laurel*
1 benzoin	1 wild alspice, fever bush
2 diospyros	2 persimmon
3 sassafras	3 sassafras
LECHEA	LECHEA
1 major *Mich.*	1 large
2 minor *L.*	2 small
3 racemulosa *Mich.*	3 bunch flowered

LEDUM	LEDUM
1 latifolium	1 Labrador tea
2 palustre	2 marsh
3 thymifolium *Lmk.*	3 thyme leaved
LEONURUS	MOTHER WORT
cardiaca	common
LESPEDEZA	LESPEDEZA
1 capitata *Mich.*	1 capitated
2 linearis *N. S.*	2 linear
3 polystachya *Mich.*	3 many spiked
4 procumbens *Mich.*	4 trailing
LIATRIS	LIATRIS
1 aspera spicata *Willd.*	1 rough
2 macrostachya *Mich.*	2 blue blazing star, long guted
3 pilosa *Ait.*	3 hairy
4 scanota	4 ragged cupped
5 squarrosa	5 rough headed
LICHEN	LICHEN
frucata	
LIGUSTICUM	LOVAGE
actæifolium cicuta maculata *L.*	actæa leaved
LIGUSTRUM	PRIVET *or Prim*
vnlgare	common
LILIUM	LILY
1 canadense coccineum	1 Canadian
2 pennsylvanicum *Don.*	2 Pennsylvanian
3 philadelphicum	3 Philadelphian
4 superbum	4 superb golden martagon
LIMODORUM	LIMODORUM
unifolium	one leaved
LINARIA	LOAD FLAX
vulgaris	common
LINNÆA	LINNÆA
borealis *rubra.*	two flowered (northern)
LINUM	FLAX
usitatissimum	common
LIQUIDAMBAR	SWEET GUM
styraciflua	maple leaved
LIRIODENDRON	TULIP TREE
tulipifera	white poplar
LITHOSPERMUM	GROMWELL
1 arvense	1 corn

2 officinale latifolium *Mich.*	2 officinal
3 virginianum onosmodium hispidum *Mich.*	3 hispid
LOBELIA	LOBELIA
1 cardinalis	1 cardinal flower, scarlet
2 claytonia *Mich.*	2 claytons
3 inflata	3 inflated
4 kalmii	4 Kalm's
5 pallida goodenoides *Willd.*	5 pale
6 puberula	6 hairy
7 syphilitica	7 blue
LONICERA	HONEYSUCKLE
1 caprifolium bracteosum *Mich.* dioica parviflora *Pers.* glauca *Fras.*	1 glaucous
2 grata	2 evergreen
3 sempervirens	3 trumpet
4 ciliata	4 fringed
5 diervilla diervilla lutea *Desf.*	5 yellow
6 *N. S. Le Con.*	6 *N. S.*
LUDWIGIA	LUDWIGIA
1 macrocarpa *Mich.* alternifoli	1 alternate leaved
2 hirsuta *Walt.*	2 hairy
3 nitida *Mich.* isnardia palustris *L.*	3 shining
LUPINUS perennis	LUPINE perennial
LYCIUM carolinianum *Mich.* salsum *Bartr.*	BOX THORN samphire
LYCHNIS chalcedonica	LYCHNIS scarlet
LYCOPODIUM	CLUB MOSS
1 complanatum	1 arbor vitæ leaved
2 dendroideum	2 ———
3 rupestre	3 rock
LYCOPUS	WATER HOREHOUND
1 americanus	1 American
2 uniflorus	2 little

3 virginicus	3 Virginian
LYSIMACHIA	LYSIMACHIA
1 angustifolia *Willd.*	1 narrow leaved
2 ciliata cordata	2 ciliated, heart leaved
3 quadrifolia	3 four leaved
4 heterophylla	4 various leaved
5 hirsuta *Mich.*	5 hairy
6 racemosa *Mich.* stricta *Ait.* bulbifera *Curt.*	6 bulb bearing
7 thyrsiflora	7 cluster flowered, tufted
MAGNOLIA	MAGNOLIA
1 acuminata	1 cucumber tree, blue flowered
2 glauca *Var.*	2 swamp, white bay, sweet
MALAXIS	MALAXIS
liliifolia *Swz.* Ophrys liliifolia	lily leaved
MALVA	MALLOW
1 americana	1 American
2 caroliniana	2 Carolina, creeping
3 rotundifolia	3 round leaved
4 sylvestris	4 common
MEDICAGO	MELICK
lupulina	black, *none such*
MELAMPYRUM	COW WHEAT
lineare americanum *Mich.*	American
MELILOTUS	MELILOT
1 alba	1 white
2 vulgaris	2 common
MENISPERMUM	MOON SEED
1 Canadense	1 Canadian
2 Virginicum	2 Virginian
MENTHA	MINT
1 canadensis borealis *Mich.*	1 northern
2 gracilis	2 slender
3 piperita.	3 pepper
4 pulegium	4 pennyroyal
MENYANTHES	BUCK BEAN
1 trachysperma *Mich.*	1 pitted

2 trifoliata	2 marsh *trefoil*, 3 leaved
MESPILUS	MEDLAR
montana *N. S.*	mountain
MIKANIA	MIKANIA
scandens *Willd.* / Eupatorium scandens *Auct.*	climbing
MIMULUS	MONKEY FLOWER
1 alatus *Ait.*	1 winged stemmed
2 ringens	2 gaping flowered
MITCHELLA	MITCHELLA
repens	creeping
MITELLA	CANICLE
diphylla	two leaved, bastard American
MNIUM	MNIUM
1 cuspidatum	1 ———
2 rosaceum	2 ———
MONARDA	MOUNTAIN MINT
1 fistulosa	1 Robin run-away
2 oblongata / mollis *Willd.*	2 long leaved, soft,
3 punctata	3 dotted, *horse mint*
4 rugosa	4 wrinkled, white
MONOTROPA	BIRD'S NEST
uniflora	one flowered, broom rape
MORUS	MULBERRY
rubra	red
MUCOR	MUCOR
1 cespitosus	1 ———
2 mucedo	2 ———
MYOSOTIS	SCORPION GRASS
1 lappula	1 prickly seeded
2 scorpioides	2 marsh
3 virginica	3 Virginian
MYRICA	CANDLE BERRY MYRTLE
1 cerifera	1 wax bearing
2 gale	2 sweet, common
3 pennsylvanica *Muhl.*	3 Pennsylvanian
MYRRHIS	CICELY
scandix	sweet rooted
NARTHECIUM	NARTHECIUM
1 glutinosum *Mich.*	1 clammy
2 ilvense *N. S.*	2 ———

NEOTTIA	NEOTTIA
1 æstivalis Ophrys æstivalis *Mich.*	1 summer
2 cernua *Willd.* O. cernua	2 drooping, ladies traces
3 pubescens *Willd.* Satyrium repens *Mich.*	3 variegated
NEPETA cataria	CATMINT, *or catnep* common
NEPHRODIUM *Mich.* POLYPODIUM *Auc.*	SHIELD FERN *see Aspidium*
1 acrostichoides *Mich*	1 terminal
2 cristatum *Mich.*	2 crested
3 filix fœmina *Mich.*	3 female
4 marginale	4 marginal
5 noveboracense	5 New-York
6 tenue *Mich.*	6 slender
7 thelypteroides *Mich.*	7 marsh
NICOTIANA	TOBACCO
1 paniculata	1 panicled
2 rustica	2 common
NIGELLA damascena	FENNEL FLOWER common
NYMPHÆA	WATER LILY
1 advena *Ait.*	1 striped flowered
2 alba	2 white flowered
3 lutea	3 yellow flowered
4 minima	4 small
5 odorata *Ait.*	5 sweet scented
6 rosea	6 rose like
7 *N. S.*	7 *N. S.*
NYSSA	TUPELO TREE
1 aquatica biflora *Mich.* integrifolia *Ait.*	1 water—*sour gum*
2 villosa *Mich.* triflora *Wang.*	2 rough—*Pepperidge*
ŒNOTHERA	TREE PRIMROSE
1 biennis	1 common
2 fruticosa	2 perennial
3 grandiflora *Ait.*	3 large flowered
4 longiflora	4 long flowered
5 muricata	5 prickly stalked

6 parviflora	6 small flowered
7 pumila	7 dwarf
ONOCLEA	ONOCLEA
sensibilis	sensitive fern
OPHIOGLOSSUM	ADDER'S TONGUE
vulgatum	common
ORCHIS	ORCHIS
1 blephariglottis *Willd.*	1 white
2 ciliaris	2 orange coloured
3 clavellata	3 yellow
Var. tridentata	
4 flava	4 ragged
Var. virescens	
5 lacera psycodes *Willd.*	5 short spurred
6 psycodes *L.* / cristata *Mich.*	6 round leaved
7 rotundifolia	7 club spurred
8 quinqueseta *Mich.*	8 many lipped
9 spectabilis	9 pale, shewy
humilis *Mich.*	
ORIGANUM	MARJORAM
vulgare	common
ORNITHOGALUM	STAR OF BETHLEHEM
umbellatum	umbel flowered
OROBANCHE	BROOM RAPE
1 uniflora	1 one flowered
2 virginiana	2 Virginian *Cancer root*
ORONTIUM	ORONTIUM
1 aquaticum	1 water
2 angustifolium	2 pointed leaved
OSMUNDA	OSMUNDA
1 cinnamomea *Mich.*	1 woolly
2 claytonia *Mich.*	2 claytons
3 interrupta *Mich.*	3 interrupted
4 regalis	4 flowering fern
OXALIS	WOOD SORREL
1 acetosella	1 common
2 stricta	2 upright
3 violacea	3 violet coloured
PANAX	GINSENG
1 quinquefolium	1 officinal
2 trifolium	2 three leaved
PANICUM	PANIC GRASS
1 crus-galli	1 cock's foot
2 dichotomum	2 divided branched

3 hispidum	3 hispid
4 latifolium	4 broad leaved
5 pubescens	5 soft, hairy
6 sanguinale	6 bloody
7 viride	7 green *bottle grass*
PARNASSIA	GRASS OF PARNASSUS
1 americana	1 American
2 asarifolia	2 kidney leaved
3 caroliniana *Mich.*	3 Carolinian
PASTINACA	PARSNEP
noxia	poisonous
PEDICULARIS	LOUSE WORT
1 asplenifolia *Muhl.*	1 fern leaved
2 canadensis } verna }	2 spring
3 galericulata	3 ———
4 gladiata *Mich.*	4 yellow flowered
PENSTEMON	PENSTEMON
pubescens *Ait.* } Chelone pentstemon }	downy, purple
PEZIZA	PEZIZA
1 lentifera	1 ———
2 punctata	2 dotted
PHALARIS	CANARY GRASS
arundinacea	reed
PHALLUS	PHALLUS
impudica	———
PHILADELPHUS	MOCK ORANGE
odorus	scented
PHLOX	LYCHNIDEA
1 divaricata	1 blue, divaricated
2 maculata	2 spotted
3 paniculata	3 panicled
4 suaveolens *Ait.*	4 white flowered
5 subulata	5 mountain pink
6 undulata	6 wave leaved
PHRYMA	PHRYMA
leptostachya	small flowered
PHYSALIS	WINTER CHERRY
pennsylvanica	Pennsylvanian
PHYTOLACCA	POKE WEED
decandra	common
PINUS	PINE or *fir tree*
1 alba *Ait.* } laxa *Ehrt.* }	1 white
2 balsamea	2 silver, *Balm of Gilead*

3 canadensis Abies candensis *H. P.*	3 hemlock spruce
4 inops *Ait.*	4 Jersey or scrub pine
5 mitis *Mich.*	5 yellow pine, short leaved
6 nigra *Ait.* denticulata *Mich.*	6 black spruce
7 pedula *Ait.*	7 black larch
8 microcarpa	8 red larch
9 rigida *Mich. f.* resinosa *Auct.*	9 pitch pine
10 rubra	10 red spruce fir
11 serotina *Mich.*	11 pond pine
12 strobus	12 Weymouth pine
13 taxifolia	13 Nootka fir
PISUM maritimum	PEA sea
PLANTAGO	PLANTAIN
1 cordata *Var.* microphylla	1 heart leaved
2 lanceolata	2 rib wort
3 major	3 great
4 maritima	4 sea
5 media *Var.* crassifolia	5 hoary leaved
6 virginica	6 Virginian
PLATANUS occidentalis	PLANE TREE or *large button wood* American
POA	MEADOW GRASS
1 annua	1 dwarf
2 compressa	2 blue grass
3 palustris crocea *Mich.*	3 marsh
4 pratensis	4 common
5 reptans	5 creeping
6 trivialis	6 field
PODALYRIA baptista tinctoria *Willd.*	PODALYRIA or *Wild Indigo* dyer's
PODOPHYLLUM peltatum	DUCK'S FOOT, *May apple* peltated
POLEMONIUM reptans	JACOB'S LADDER creeping
POLYGALA	MILKWORT
1 cruciata	1 cross shaped

2 incarnata	2 flesh coloured
3 lutea nana *Mich.*	3 yellow flowered
4 paucifolia	4 evergreen snakeroot
5 rubella polygama *Walt.*	5 polygamous
6 sanguinea	6 bloody
7 senega	7 Senega snakeroot
8 verticillata	8 whorled leaved
POLYGONUM	KNOT WEED
1 arifolium	1 halbert leaved
2 aviculare	2 knot grass
3 coccineum	3 scarlet
4 fagopyrum	4 buck wheat
5 hydropiper	5 water pepper
6 lapathifolium *Ait.*	6 pale flowered
7 pennsylvanicum *Curt.*	7 Pennsylvanian
8 persicaria	8 spotted
9 sagitatum	9 arrow leaved
10 scandens	10 climbing
11 virginianum rostratum	11 Virginian
POLYPODIUM	POLYPODY
1 hexagonopterum	1 ———
2 virginicum	2 Virginian
3 vulgare	3 common
POLYTRICHUM	POLYTRICHUM
1 ambiguum	1 ambiguous
2 pennsylvanicum	2 Pennsylvanian
PONTEDERIA	PONTEDERIA
cordata	heart leaved
POPULUS	POPLAR TREE
1 angulata *Ait.* angulosa *Mich.*	1 angular—*Cotton tree*
2 balsamifera	2 Tacamahac—*Balsam poplar*
3 candicans	3 heart leaved
4 grandidentata *Mich.* trepida *Muhl.*	4 Canada
5 heterophylla	5 various leaved
6 monilifera	6 ———
7 tremuloides *Mich.*	7 smooth—*Aspen*
PORTULACA	PURSLAIN
oleracea	common
POTENTILLA	CINQUEFOIL
1 anserina	1 wild tansy

2 canadensis	2 Canada
3 fruticosa	3 shrubby
4 floribunda *N. S.*	4 many flowered
5 hirsuta	5 hairy
6 pennsylvanica	6 Pennsylvanian
7 *N. S.* affin. *Penn.*	7 ———
8 recta	8 upright
9 reptans	9 creeping
10 sarmentosa *Willd.*	10 running
11 simplex	11 simple
POTHOS	POTHOS
1 fœtida *Ait.* Dracontium fœtidum	skunk cabbage
PRENANTHES	PRENANTHES
1 alba	1 white flowered
2 altissima	2 tall
3 cordata	3 heart leaved
4 muralis	4 wall
5 spicata *Walt.*	5 spiked
6 virgata *seu* rubicunda	6 red flowered
PRIMULA	PRIMROSE
1 farinosa	1 birds' eye
2 mistasinica	2 Canadian
PRINUS	WINTER BERRY
1 glaber	1 evergreen—*Ink berry*
2 do. *Var.*	2 ———
3 lanceolatus *Don.*	3 spear leaved
4 lævigatus	4 smooth
5 montanus *N. S.*	5 mountain
6 padifolius	6 broad leaved
7 verticillatus	7 whorled
PRUNELLA	SELF HEAL
1 mariana	1 sea
2 pennsylvanica *Willd.* ovata *H. P.*	2 Pennsylvanian
3 vulgaris	3 common
PRUNUS	CHERRY TREE
1 americana	1 American
2 canadensis	2 Canadian
3 montana *N. S.*	3 mountain
4 pennsylvanica *Ait.* borealis *Mich.*	4 upright
5 nigra (americana)	5 yellow plumb
6 pumila	6 dwarf plumb
7 serotina	7 wild cherry
8 virginiana	8 choke cherry

PTERIS	BRAKE
1 aquilina	1 common
2 atropurpurea	2 purple
PULMONARIA	LUNG WORT
1 sibirica	1 Siberian
2 virginica	2 Virginian
PYCNANTHEMUM	MOUNTAIN MINT
1 canescens *Mich.*	1 white
2 incanum *Mich.*	2 hoary
PYROLA	WINTER GREEN
1 asarifolia	1 kidney leaved
2 maculata	2 variegated leaved
3 minor	3 small
4 rotundifolia	4 round leaved
5 secunda	5 notched leaved
6 umbellata	6 umbelled
7 uniflora	7 one flowered
PYXIDANTHERA	PYXIDANTHERA
barbulata *Mich.*	bearded
PYRUS	PEAR OR APPLE
1 botryapium *Willd.*	1 blue fruited
2 cydonia	2 common quince
3 erythrocarpa	3 red fruited
4 melanocarpa	4 black fruited
5 ovalis	5 oval leaved
QUERCUS	OAK
1 alba	1 common white
2 bicolor	2 swamp
3 castanea	3 yellow, chesnut
4 coccinea *Mich.*	4 scarlet
5 falcata	5 Spanish, downy, red
6 filiformis	6 long stalked
7 ilicifolia *Willd.* / banisteri *Mich.*	7 scrub or barren
8 macrocarpa *Mich.*	8 large fruited
9 montana *Willd.* / prinus monticola *Mich.*	9 rock chesnut
10 monticola	10 rock oak
11 olivæformis	11 mossy cup
12 heterophylla	12 various leaved
13 nigra / ferruginea	13 black jack
14 obtusiloba *Mich.* / stellata *Willd.*	14 post white
15 palustris *Mich.* / *Var.* humilis	15 pin

16 prinus prinus palustris *Mich.*	16 chesnut white
17 maritima	17 sea willow
18 prinoides	18 chinquapin
19 rubra	19 red
20 tinctoria	20 black, dyers'
21 triloba	21 downy black
QUERIA	QUERIA
canadensis Anychia dichotoma *Mich.*	forked
RANUNCULUS	CROW FOOT
1 acris	1 upright
2 bulbosus	2 bulbous
3 hirsutus *N. S.*	3 hairy
4 flammula	4 small Spear wort
5 marilandicus	5 Maryland
6 pennsylvanicus	6 Pennsylvanian
7 saniculæformis	7 sanicle leaved
8 sceleratus	8 celery leaved
9 recurvatus	9 bent
10 trifoliatus	10 three leaved
RAPHANISTRUM	RAPHANISTRUM
luteum	marsh
RHAMNUS	BUCK THORN
catharticus	purging
RHEXIA	RHEXIA
1 virginica	1 common
2 fungosa *N. S.*	2 fungous *N. S.*
3 ——— *N. S.*	3 ——— *N. S.*
RHINANTHUS	YELLOW RATTLE
virginicus	Virginian
RHODODENDRON	ROSE BAY
maximum	mountain laurel
RHODORA	RHODORA
canadensis	Canada
RHUS	SUMACH
1 copallinum æstivale	1 copal
2 glabrum	2 common, smooth
3 fœtans	3 stinking
4 radicans	4 climbing poison vine
5 toxicodendron	5 trailing poison oak
6 typhinum	6 woolly
7 vernix	7 varnish tree

RIBES	CURRANT
1 atropurpureum	1 dark red
2 cynosbate	2 prickly fruited
3 floridum *Willd.*	3 large fruited
4 glandulosum	4 glanulous, procumbent
5 gracile *Mich.*	5 slender, two flowered
6 rigens *Mich.*	6 upright, red fruited
7 *N. S.* fruct. alba.	7 *N. S.*
8 *N. S.* Cattskill	8 *N. S.*
ROBINIA	ROBINIA *Locust tree*
1 pseud-acacia	1 false acassia
2 viscosa glutinosa *Curt.*	2 clammy
ROSA	ROSE
1 caroliniana parviflora *Muhl.*	1 Pennsylvania
2 canina	2 dog rose
3 corymbosa	3 swamp
4 gemella	4 twin flowered
5 lucida *Ehrt.*	5 shining leaved
6 rubiginosa	6 sweet briar
RUBUS	BRAMBLE
1 hispidus	1 strawberry leaved
2 lucidus *N. S.*	2 shining
3 occidentalis	3 American raspberry
4 odoratus	4 flowering raspberry
5 parvifolius *Walt.*	5 small leaved blackberry
6 plicatus *N. S.*	6 ———
7 procumbens	7 dewberry
8 strigosus *Mich.*	8 mountain
9 villosus *Ait.* vulpinus *Desf.*	9 American blackberry
10 ——— *N. S.*	10 *N. S.*
11 ——— *N. S.* Cattskill	11 *N. S.*
RUDBECKIA	RUDBECKIA
1 aspera	1 rough
2 digitata	2 digitated
3 laciniata	3 jagged leaved
4 triloba	4 three lobed
RUMEX	DOCK
1 acetosella	1 sheep sorrel
2 acutus	2 sharp pointed
3 aquaticus	3 water
4 crispatulus	4 curled
5 persicarioides	5 arsesmart leaved

6 sanguineus	6 bloody
7 verticillatus	7 whorled
SAGITTARIA	ARROW-HEAD
1 graminifolia	1 grass leaved
2 heterophylla	2 various leaved
3 latifolia *Willd.*	3 broad leaved
4 obtusa *Muhl.* simplex *Pers.*	4 blunt leaved
5 pubescens	5 hairy
6 sagittifolia	6 pointed leaved
SALICORNIA	GLASS WORT
1 ambigua	1 doubtful
2 herbacea	2 marsh
3 virginica	3 Virginian
SALIX	WILLOW
1 caroliniana	1 Carolina
2 conifera *Willd* longirostris *Mich.*	2 cone bearing
3 discolor	3 red rooted
4 incana *Mich.*	4 hoary
5 myricoides *Muhl.*	5 gale leaved
6 nigra *Muhl.*	6 black
7 palustris *N. S.*	7 marsh
8 ——— *N. S.*	8 *N. S.*
SALSOLA	SALT WORT
1 kali	1 prickly
2 soda	2 long leaved
SALVIA	SAGE
1 lyrata	1 lyre leaved
2 officinalis	2 officinal or common
SAMBUCUS	ELDER
1 canadensis atropurpurea	1 Canadian black berried
2 pubescens *Mich.* rubra	2 red berried
SANGUINARIA	BLOOD ROOT
canadensis	American—*Puccoon*
SANGUISORBA	BURNET SAXIFRAGE
1 canadensis	1 long spiked
2 media	2 short spiked
SANICULA	SANICLE
1 canadensis	1 Canadian
2 marilandica	2 Maryland, black snake root
SAPONARIA	SOAP WORT
officinalis	common

SARRACENIA	SIDE SADDLE FLOWER
1 purpurea	1 purple
2 do. *Var.*	2 ———
SAURURUS	LIZARD'S TAIL
cernuus	nodding
SAXIFRAGA	SAXIFRAGE
1 nivalis (vernalis)	1 early
2 pennsylvanica	2 common American
3 virginica *Mich.*	3 Virginian
SCHEUCHZERIA	SCHEUCHZERIA
palustris	marsh
SCHŒNUS	DOG RUSH
1 albus	1 white
2 ciliaris	2 fringed
3 glomeratus	3 round headed
4 fuscus	4 brown
5 setaceus	5 bristly
6 sparsus	6 spreading
SCIRPUS	CLUB RUSH
1 capitatus	1 headed
2 lacustris	2 bulrush
3 macrostachius *Mich.*	3 large spiked
4 sylvaticus	4 wood
5 triqueter *Mich.* / americanus. *Pers.*	5 three sided
SCUTELLARIA	SCULL CAP
1 galericulata	1 common
2 hyssopifolia	2 hyssop leaved
3 integrifolia	3 entire leaved
4 lateriflora	4 lateral flowered
5 ovalifolia *Pers.* / eliptica	5 oval leaved
6 parviflora	6 small flowered
SELINUM	MILK PARSLEY
canadense	Canadian
SENECIO	GROUNDSEL
1 aureus	1 golden, heart leaved
2 balsamitæ	2 balsamita like
3 canadensis	3 Canadian
4 hieracifolius	4 hawk weed leaved
5 obovatus	5 obovate leaved
SILENE	CATCH FLY
pennsylvanica *Mich.*	Pennsylvanian
SINAPIS	MUSTARD
nigra	black

SISYMBRIUM	
nasturtium	
SISYRINCHIUM	
1 anceps. *Lmk.* gramineum *Curt.*	1 grass leaved
2 mucronatum *Mich.*	2 blue eyed grass
SMILAX	
1 caduca	1 deciduous
2 glauca *Mich.* sarsaparilla	2 medicinal
3 herbacea	3 herbaceous
4 hispida	4 hispid
5 laurifolia	5 laurel leaved
6 peduncularis	6 long stslked
7 quadrangularis *Muhl.*	7 square stalked
8 rotundifolia	8 round leaved
SMYRNIUM	ALEXANDERS
1 aureum	1 golden
2 barbinode	2 bearded
3 integerimum	3 entire leaved
4 trifoliatum thapsia *L.*	4 heart leaved
SOLANUM	NIGHTSHADE
1 dulcamara	1 bitter sweet
2 nigrum	2 common
SOLIDAGO	GOLDEN ROD
1 arguta	1 sharp notched
2 axillaris *N. S.*	2 ———
3 aspera	3 rough leaved
4 canadensis	4 Canadian
5 ciliaris	5 ciliated
6 flexicaulis	6 bent stalked
7 gigantea	7 gigantic
8 lanceolata *Ait.* spec. graminifolia	8 spear leaved
9 latifolia	9 broad leaved
10 noveboracensis	10 New-York
11 nemoralis *Ait.*	11 wood
12 odora *Ait.*	12 sweet scented
13 patula	13 open branched
14 rigida	14 hard leaved
15 rugosa	15 wrinkled leaved
16 scabra	16 rough
17 squarrosa	17 scurfy
18 sempervirens	18 narrow leaved
19 ulmifolia	19 elm leaved

20 virga aurea	20 common
21 *N. S.*	21 *N. S.*
22 *N. S.*	22 *N. S.*
23 *N. S.* aff. virga. aurea.	23 ———
24 *N. S.* aff. concolor	24 ———
25 *N. S.* Cattskill	25 ———
26 petiolaris	26 late flowered
SONCHUS	SOW THISTLE
1 alpinus	1 Alpine Canadian
2 acuminatus	2 pointed
3 arvensis	3 corn
4 floridanus	4 large flowered
5 leucophleus	5 white flowered
6 oleraceus *Var.* asper	6 common
7 pallidus *Willd.*	7 pale
8 palustris	8 marsh
9 macrophyllus	9 large leaved
SORBUS	SERVICE TREE
montana *N. S.*	mountain
SPARGANIUM	BURR REED
erectum	upright
SPARTINA	ROUGH GRASS
1 glabra	1 smooth
2 polystachia Trachynotia *Mich.*	2 many spiked
SPARGANOPHORUS	SPARGANOPHORUS
verticillatus *Mich.*	whorled
SPARTIUM	BROOM
scoparium	common
SPHAGNUM	SPHAGNUM, *Peat Moss*
vulgare *Mich.* latifolium *Hed.*	broad leaved
SPIRÆA	SPIRÆA
1 alba	1 white flowered
2 aruncus	2 goats' beard
3 crenata	3 crenated
4 corymbosa carpinifolia *Willd.*	4 broad leaved
5 hypericifolia	5 St. Johns wort leaved
6 lobata	6 lobe leaved
7 montana	7 mountain
8 opulifolia	8 snow ball leaved
9 stipulata	9 large stipuled
10 tomentosa	10 downy leaved

11 trifoliata Gillenia trifoliata *Mœnch.*	11 Indian physic, ipecacuanha
STACHYS	HEDGE NETTLE
1 aspera *Mich.*	1 rough
2 tenuifolia *Muhl.*	2 thin leaved
STAPHYLEA	BLADDER NUT
1 pinnata *Var.*	1 pinnated
2 trifoliata	2 three leaved
STATICE limonium	THRIFT marsh rosemary
TEUCRIUM	GERMANDER
1 canadense	1 nettle leaved
2 virginicum	2 Virginian
THALICTRUM	MEADOW RUE
1 rugosum *Ait.*	1 rough leaved
2 ——— affin.	2 ———
THESIUM umbellatum	BASTARD TOAD FLAX umbelled
THLAPSI	BASTARD CRESS
1 arvense	1 penny cress
2 bursa pastoris	2 shepherd's purse
3 campestre	3 mithridate mustard
THUYA occidentalis	ARBOR VITÆ American—*White cedar*
THYMUS virginicus	THYME Virginian
TIARELLA cordifolia	TIARELLA heart leaved
TILIA	LIME OR LINDEN TREE
1 americana	1 bass wood
2 glabra	2 smooth, bass wood.
3 pubescens	3 white wood—*hairy*
TRICHOSTEMMA	TRICHOSTEMMA
1 dichotoma	1 branched
2 lineare	2 linear leaved
TRIENTALIS europea	WINTER GREEN chick weed
TRIFOLIUM	CLOVER OR TREFOIL
1 arvense	1 hare's foot
2 pennsylvanicum	2 Pennsylvanian
3 repens	3 white clover
TRILLIUM	TRILLIUM
1 erectum atropurpureum *Curt.*	1 upright flowered

2 erythrocarpon *Mich.* undulatum	2 red fruited
3 grandiflorum	3 tulip
4 luteum	4 yellow
5 pendulum	5 pendent
6 pictum	6 dotted
7 pusillum	7 dwarf
8 sessile atropurpureum	8 sessile
9 umbellatum	9 umbellated
TRIOSTEUM	FEVER WORT
perfoliatum majus *Mich.*	perfoliate
TROLLIUS	GLOBE FLOWER
americanus *Muhl.*	American
TURRITIS	TOWER MUSTARD
1 hirsuta	1 hairy
2 lævigata	2 American smooth
TYPHA	CAT'S TAIL or *Reed Mace*
1 angustifolia	1 narrow leaved
2 latifolia	2 broad leaved
ULMUS	ELM TREE
1 americana	1 common weeping
2 aspera fulva *Mich.*	2 slippery, red
UNIOLA	SPIKE GRASS
spicata Festuca distichophylla	common
UMBILICARIA	UMBILICARIA
1 pustulata	1 blistered
2 vellea	2 ———
URTICA	NETTLE
1 canadensis	1 Canadian
2 divaricata	2 divaricated
3 gracilis	3 slender stalked
4 procera	4 tall
5 pumila	5 dwarf
6 urens	6 lesser
7 whitlowi *Muhl.*	7 Whitlow's*

---

* *Dr. Muhlenberg's Description of the Urtica Whitlowi.*

Caule. 5 angulo, simplici, orgyali, urente.
Foliis alternis, cordato-ovatis, acutis, serratis, trinerviis, punctatis, petiolatis, supremis oppositis.
Stipula bifida.—

URTICULARIA ceratophylla	HOODED MILFOIL horn leaved
UVULARIA	BELLWORT
1 langiinosa	1 woolly
2 lanceolata	2 spear leaved
3 perfoliata	3 perfoliate
4 rosea	4 rose coloured
5 sessilifolia	5 sessile leaved
VACCINIUM	WHORTLE BERRY
1 album	1 white
2 cespitosum	2 dwarf
3 corymbosum *L.* amœnum *Ait.* disomorphum *Mich.*	3 broad leaved—*bilberry*
4 frondosum glaucum *Mich.*	4 bushy
5 ligustrinum *Mich.*	5 privet leaved
6 macrocarpon *Ait.*	6 American cranberry
7 oxycoccus	7 common
8 pennsylvanicum *Mich.*	8 sugar
9 resinosum *Ait.*	9 clammy
10 myrtilloides	10 bluets
11 stamineum	11 green wooded
12 tenellum	12 gale leaved
13 venustum	13 red twigged
14 virgatum pennsylvanicum *Mich.*	14 blue huckle berry
VALERIANA pauciflora	VALERIAN three leaved
VERATRUM	SWAMP HELLEBORE
1 luteum	1 nodding *(blazing star)*
2 viride *Ait.*	2 green flowered
VERBASCUM	MULLEIN
1 blattaria	1 moth
2 thapsus	2 great
VERBENA	VERVAIN
1 hsstata	1 halbert leaved
2 urticifolla	2 nettle leaved

Paniculis pedunculatis, axillaribus, dichotomis, hirsutis, petiolo longioribus masculis, et terminalibus fœmineis—

Capsula orbicularis, compressa, mucronata, proxime *divaricata* et *candensis*.

Radix perennis, tuberosa.

VERNONIA noveboracensis *Mich.*	VERNONIA common
VERONICA	SPEEDWELL
1 anagallis	1 pimpernel or water
2 beccaburga	2 brooklime
3 officinalis	3 officinal
4 serpyllifolia	4 smooth—*Paul's betony*
5 virginica	5 Virginian
VIBURNUM	VIBURNUM
1 acerifolium	1 maple leaved
2 arboreum *Bart.* pyrifolium	2 tall
3 cassinoides	3 thick leaved
4 cyaneum *l'Her.*	4 ———
5 dentatum	5 tooth leaved
6 lævigatum	6 smooth
7 lantanoides *Mich.*	7 hobble bush
8 lentago	8 pear leaved
9 luteum	9 ———
10 molle	10 woolly
11 nitidum	11 shining
12 nudum *Var.* squammatum	12 naked, oval leaved
13 opuloides	13 shrub cranberry
14 pimina *Mich.*	14 ———
15 prunifolium	15 plum leaved, black hued
VICIA	VETCH
1 americana	1 American
2 cracca	2 tufted
3 parviflora	3 small flowered
4 pusila	4 small
VINCA minor	PERIWINKLE small
VIOLA	VIOLET
1 cucullata *Ait.*	1 hollow leaved
2 lanceolata	2 spear leaved
3 pallida *Muhl.*	3 pale
4 palmata *Ait.*	4 palmated
5 pedata	5 multifid
6 primulifolia	6 prim rose leaved
7 pubescens *Ait.* pennsylvanica *Mich.*	7 yellow flowered
8 obliqua *Ait.*	8 oblique flowered
9 rostrata *N. S.*	9 beak flowered
10 sagittata	10 arrow leaved
11 ——— *N. S.*	11 *N. S.*

VITIS	VINE or GRAPE
1 hirsuta *N. S.*	1 hairy
2 labrusca taurina *Walt.*	2 fox
3 riparia *Mich.*	3 river or sand
4 vulpina cordifolia *Mich.*	4 winter or chicken
XANTHIUM orientale	XANTHIUM eastern
XYRIS	XYRIS
1 anceps *Pers.* jupicai *Mich.*	1 two edged
2 brevifolia	2 shorth leaved
ZANTHOXYLUM fraxineum *Willd.* americanum	TOOTH ACHE TREE common