(March 17. 1815

17 March 1815
in upper rt. corner

Few circumstances are most pleasing to the contemplative or uncultivated mind than the regular alterations which we here observe, The changes of the moon, the varied appearances of the "Sidereal Heavens", the succession of day & night, and most of all the enchanting vicissitude of the seasons. At the return of Spring all nature is enlivened. During the winter which has passed, the unusual intensity of cold, the invasion of our country, the blockade of our harbors with fleets, & the distraction of intestine dissentions, with which the wickedness of the people have been punished, had involved the ~~United States~~ in gloom. This season we feel with peculiar force the effects of change. The return of Spring is an assurance of the continuance of the smiles of Providence; and country rejoices more than ever because the peaceful olive again buds and puts forth its leaves. Commerce stretches her wings to the ocean and Agriculture casts a complacent look upon the fields.

"Yet! postering breezes blow,
Ye softening dews, ye tender showers descend
And temper all than wored enlivening Sun
Into the perfect year."

that the earnest expectations of the husbandman, the merchant & the statesman may be realized. — Our hopes swell in

bursting bud, expand in the leaves, and may they flourish in the flower and be realized with an exuberance of fruit.

We rejoice with our fellow citizens at the renovation of Nature, ~~and~~ the return of Peace, and the pleasing prospects of plenty and extensive happiness, but we have our peculiar joy, that of meeting again those who honored us with their attendance the last season. We again feel a genial influence which awakens our emulation. To be once more surrounded by such an audience assures us that our exertions were well recieved and encourages us to proceed.

At our last meeting we anticipated what we have often enjoyed, that of being frequently reminded of you in our rambles thro' the wilds of Natures, and our pleasure was heightened when we allowed ourselves to recollect that ~~the~~ we might also be associated by you with those very objects which so often and so agreably recalled you to our recollection.

Botany, the (branch of) Science which we shall attempt to teach is an extensive branch of Natural History. Nat.l History enclusdes the description of every thing not effected by the art of man. The art of man operates upon the materials presented by nature, and only changes there external forms. The Sun Stars, planets and moon are strictly objects for the attention of the Naturalist but we must turn from these great great outlines of the visible creation, and retire to this spot of earth where we dwell, and if we consider the great divisions into land and water, rivers and mountains, woods & rocks, fertile spots and barren wastes, we shall soon discover that this earth that this earth is the proper abode of such a being as man (a rational Being), where altho' there be given him much

A brief history of Botany was given in the last lecture and many celebrated men ~~were introduced to your notice~~ who have became famous for their zeal in the pursuit of Nat' Science were introduced to your notice

A brief history of Botany was given last ~~year~~ lecture and many ~~distinguished~~ distinguished men were introduced to your notice, who have famous for zeal in the pursuit, but ~~Botany and~~ Philosophy and Philosophic Botany is not confined exclusively to gentlemen. Several Ladies have shown with distinguished lustre in this Elegant branch of knowledge. The 1st we shall mention is

Maria Sybil Merian, daughter of Mathias Merian of Francfort, where this Lady was born in 1647. Her father was a celebrated engraver, & from him she acquired her taste in drawing. He put her under the instruction of an eminent painter, from whom she learnt great neatness of managing the pencil, & remarkable delicacy of colouring. She was particularly fond of painting objects of Natural History, such a plants, reptiles & insects, wh. she executed ~~with~~ from nature, & at the same time she studied these objects with a curiosity and with the inquisitive spirit of a naturalist; so that her knowledge & her works made her every day more & mor celebrated.

She commonly painted her subjects of Natural History on Vellum & in water colours & she finished an astonishing number, She painted the caterpillar in all ~~its~~ various changes & forms in wh. they successively appear, from their quiescent state till they become butterflies. She painted Frogs & Toads, serpents & Spiders with such truth and exactness, that some Ladies would hardly venture to touch them.

Not contented with painting ~~all~~ the ~~Plants~~ Insects & Reptiles of her own country, this indefatigable Lady crossed the Atlantic & visited Surinam to paint those Insects & Reptiles wc. were peculiar to that climate; & at her return to Europe she published two Vol.s of Engravings after her paintings, which are some of the first things of the kind extant. Some of her original paintings are preserved in the British Museum and are usually shown to strangers as great curiosities. She died in 1717. She left a daughter, who painted in the same stile, & who had accompanied her mother to Surinam. This young Lady published a 3d Vol. collected from designs of her mother, wc. complete work has been always admired by the learned, as well as by the professors of Painting. (Encycl.

Her glistening serpents, her cool frogs & her crawling ~~serpents~~ spiders were executed with horrible precision.

The next Lady I shall mention who distinguished herself in this line was Miss Ann Lee of London, Daugh: of James Lee, who published an Eng. translation of Linnaeus's System of Botany. She also painted in water colours on vellum, & altho' few men in England (Ehret excepted) could surpass her in painting insects; yet she did not come up to the high grade of Madame Merian in either reptiles or Insects. As to plants Miss Lee executed hers with more botanical precision than the Lady just mentioned; this may have been owing to the precise knowledge of the parts of plants & an higher perfection of the Science of Botany than to any defect in the Art of the German Lady.

These two instances are sufficient to shew that the Ladies are fully equal to ~~man the~~ other sex in whatever demands ingenuity or calls for the expression of taste.

Here we cannot but recommend the art of Painting or Designing to both sexes as a part of their education, ~~I think~~ We in this country ought to

aught to imitate those in Europe, who always enumerate Drawing among the objects of genteel education. If the time consumed to play tolerable ill upon the Piano was but devoted to the art of drawing, there would be small, to say the least, more to show for it. Drawing is a charming accomplishment. What a decided superiority has a man who knows how to draw accurately over one who does not? On visiting any curious machinery he can by sketching it, carry away its principles and its structure; and so of a view or interesting landskip or any object of Nat. Hist.; & it is full as useful & ornamental to the Ladies as to the gentn. if not more so; & they generally surpass men in this accomplishment, from possessing a more refined taste.

The Ladies may find the art of Drawing not only agreable & amusing, but they may find it highly useful, in a change of fortune, or rather under the pressure of adverse circumstances, as may appear by the History of Elizabeth Blackwell.

We have Colleges for teaching every art & science. We have minute directions in gardening & in agriculture. We have numberless books of the doctrine

business or self policy or the art of rising in life, while that w.ch is worth ~~them all~~, the doctrine of domestic happiness, is left comparatively uncultivated, yet it is that philosophy spoken of by Ld Bacon, "which comes home to mens business and bosoms!"

The history of every civilized nation, nay every mans own recollection, affords abundant proofs that the female mind is nearly equally capable ~~His~~ with the male. — Education and circumstance rouse the latent energies of the female soul.

Whence is it the the children of widows become, generally better men & better women than children brought up in conjunction with a father. It is because afflictive circumstances have called forth the dormant energies of heroic woman; & perfected a virtue peculiar to the sex; a virtue w.ch originated in conjugal affection.

Can this fleeting world, this anxious scene exhibits a more interesting sight to the Philosopher than what a virtuous widow weeping over her "houseless child of event!" Yes! one picture is still more affecting where the father & husband is worse than dead

thro' his folly and his crimes. Where, of conjugal love has not been ripened into maternal affection, and grown up into the highest of the social virtues, nay, more sublimed into religion, the wretched woman sinks into intemperance, or is lost in despair. An over anxious & unrestrained fondness is not true maternal affection. Maternal affection is where judgement draws more closely the bonds of Nature. The happiness of the conjugal state says Addison appears heightened to the highest degree, when we see two persons of accomplished minds united in the same interest and affections and in their state & studies. The reverse of this must occasion anguish inexpressibly severe. — but I leave these general reflections & hasten to exemplify them in an account of an ingenious, learned & excellent but unfortunate woman who enlivened the dungeon of her husband with flowers; & entwined his fetters with the white rose & the myrtle

It is a singular fact, says Dr Pultney, that Physic is indebted for the most complete set of figures of the Medicinal plants

to the genius and Industry of a ~~Lady~~, and which were exerted, at a time, & on a distressing occasion that redounds to her honor & praise. The name of Mrs. Elizth. Blackwell is well known for her own fate (says he) and for the fate of her unfortunate husband, who suffered death by the hands of the common executioner in 1717. This Lady was the daughter of a merchant of Aberdeen; of which city Dr. Alexr. Blackwell, her husband was a native, & where he received an University Education; but took his degree of Dr. Mo. under Boerhaave at Leyden.

After having failed in his attempt to introduce himself into practice, first in Scotland, & afterwards in London he became a corrector of a printing press and soon after commenced printing for himself. Soon he was however thrown into prison. To support him there & to relieve his distresses, his amiable wife, having been instructed in drawing & painting exerted all her talents. — Understanding that an Herbal or Val: of Medicinal Plants (were a desideratum) much wanted by the faculty, she exhibited to Sir Hans

Hans Sloane Dr Mead & others of the 1st rank, some specimens of her art in Painting Plants, who being men of taste, as well as learning, approved them so highly as to encourage her to go on with her work; which she prosecuted with such unwearied diligence, that she was enabled at the end of two years to relieve her husband from his confinement for that time. A proud triumph for a woman! Dr Isaac Rand was ~~at that time~~ then, Demonstrator of Botany to the Company of Apothecaries, in the garden at Chelsea. By his advice Mrs Blackwell took up her residence opposite the Physic Garden, in order to facilitate her design by receiving the plants as fresh as possible from the earth: for it seems she drew them by the eye, and not as some now do in London by the Camera. Rand, not only promoted her work, as it regarded subscriptions with the public, but together with the celebrated Prof Philip Miller, the Prince of Gardeners, as Linnæus calls him, afforded her direction and assistance in the choice of plants.

Some may say that it is no great affair for a Lady to make a great number of drawings & to sell them for for an handsome sum of money & therewith take from confinement & an unprincipled husband. But she did more ~~than this~~; she turned Engraver; for after completing her paintings she engraved with her own hands 500 plants on copper plate & them coloured them agreeably to Nature. Each plate is accompanied with an engraved page, containing the Latin & English (officinal) names, followed by a short description of the plant, & a summary of its qualities & uses. After these occur the name in various other Languages. These illustrations were the only share her husband took in the work.

She published her 1st Vol: in 1737 & was allowed to present it in person to the Royal College of Phys.ns, who gave her a public testimonial of their approbation with leave to prefix it to her book. The 2d Vol: was printed in 1739 & the whole published under the following titles. "A Curious Herbal, containing 500 cuts of the most useful Plants &c. are used in Med.e Physic, engraved on folio copper plates after drawings taken from life by Eliz Blackwell.

In which is added a short description of the Plants & their common use in Physic." This!

The illfated man, her husband, after his failure in physic & in printing was an unsuccessful candidate for the place of secretary to the Society for the encouragement of learning. He experienced many disappointments incident to speculators. He formed schemes in agriculture & wrote a treatise on that subject wh. was the cause of his going to Sweden. In that Kingdom he drained marshes & practiced Physic and was even employed in that capacity by the King. But his evil genius never left him & notwithstanding the exertions and virtues of his wife on his behalf he involved himself in some wicked designs & suffered death on the scaffold in 1747.

As for his amiable wife, so respectable a performance as hers, really attracted the attention of Phys.ns of the continent. It was translated into German in 1750. To this edition was prefixed a most elaborate catalogue of Botanical authors. In 1773, a supplementary volume, exhibiting plants omitted by Mr Blackwell was published under the direction of Ludwig, Rose and Boehmer. In this form the work of this learned & worthy Lady surpassed all that had been published.

My father owns this work of Mr Blackwells and it is in two folio volumes as large as the prayer books used in that desk in the Episcopal churches. The engravings are correct and frequently referred to by Linnaeus in his Systema Naturæ, which is alone sufficient to stamp her reputation, altho the engraving is not of that exquisite kind which for which modern engravers, especially the French are now so justly admired. We should take a delight showing this work particularly to Bachelors, that they might see to what to what degree of Perfection the other sex may ascend, when their talents are called forth & sublimed by conjugal affection.

The Vegetable which covers the face of it and the Animal, which animates the whole.

The Science which we shall attempt to explain is called Botany, which does not consist in arrangement, ~~only~~ for system is only the means of facilitating a knowledge of the distinctive characters, virtues, economy & internate structure of all Plants. In the whole circle of the Sciences ~~[illegible]~~ no study ~~[illegible]~~ excites, a more continued progression of pleasure than this; and it has this peculiarity that no frequency of contemplation, closeness of investigation ever brings weariness satiety or disgust for here gratification & appetite are perpetually interchanging

"There is not a tree,
"A plant. — a leaf. — a blossom, but contains
"A folio volume. We may read & read,
"And read again, and still find something new,
"Something to please & something to instruct. (Vitelinate)

We will not however hold it up ~~merely~~ as a Science merely to divert the mind, amuse the imagination or gratify the fancy; for it is a pleasing exercise for the improvement & enlargement of a rational mind. Besides Botany is of the first importance to a country circumstanced like ours, which is a country, commercial agricultural and manufacturing.

Botany is an extensive science; it is the study of an ordinary life; and a man only becomes a proficient in it when his eyes fail him to convey the beauty, & his senses of

the vegetable which adorns its face, and the animal which is sustained by the vegetable. But only these will come under our notice viz the vegetable as forming the science of Botany.

Botany is the Science which teach the uses, structure and physiology of the vegetable race. The hard names and harsh terms with which the science is encumbered are merely the hooks and ladders by which we come at knowledge. It is always easy to pluck the fruit when it is within our reach.

Botany is an extensive science. is the study of an ordinary life, and a man only becomes proficient, when his eyes fail him to convey the beauty, his sense of smelling to communicate the odours, with which the objects of it are characterized & his faltering limbs refuse to support him to the spot where they grow. What then can be expected from us, who have only just entered the garden of Flora, & have scarcely learned to examine with attention. Linneus divides the vegetable kingdom into 24 Classes. These into about 120 orders and these orders into 2000 genera & these gener into 25.000 about 20.000 species - of this 250000. ~~which~~ We have only seen a few. You will not then expect that we should answer every question which may be asked or be enabled to call every ~~plant~~ vegetable family by their right names. We might with as much propriety be expected to call every man in this extensive City by his name. You may understand the organization of a seed the various kinds of roots - the stems leaves &c of an individual Plant, together with its Physiology and

We do not say this to discourage questions ~~only~~ but to excuse ourselves to you should we answer wrong or confess our ignorance. We shall never blush to be wrong for it is no disgrace but shall ~~study~~ to be right as much as possible. We would wish to be questioned that our attention may be always awake

and structure without knowing that the Root was said to be praemorse, repent, horzontal or its leaf ovate oblong rotund, peltate, centrepeltate, decurrent, amplexicaule decompound &c. &c.

We have always been sorry that Botanists have been obliged to use a peculiar language that should render a beautiful Science forbiding, that the stalk of inviting flowers should be beset with so many ugly thorns.

A language is absolutely necessary or botanists of different nations could not understand what plant was described. The first writers upon botany from not having words which expressed slight differences are entirely unintelligible. But the language of Botany derived from the Latin & Greek which are concise language, is now so perfect that all nations can read it and such is the degree of its perfection the English language derives many of its most expressive terms. When you become a little familiarized to it you will admire its beauty (Describe a plants from Jussieu!)

that constitute that code of knowledge, so useful to every man in his passage through ~~the~~ life, and so needed in such a country as this, where knowledge is power.

Instead therefore of trammeling the mind & cramping enquiry by attaching ourselves exclusively to artificial systems, and systems, let us rather study the accordance, the relationship, the conformity & utility which the different objects of nature bear to one another, and to ourselves, which, altogether constitute that harmony in Nature, and which prove it to be the work of one Almighty & beneficent Architect.

Notwithstanding what we have said against we should have you avoid ~~paying too much attention~~ paying too much attention to mere system or arrangement, we can not too earnestly impress their importance upon those who have ~~their~~ ideas yet to attain upon the subject. The Objects of Natural History and particularly Botany are so multitudinous that it would be impossible to study & recollect our researches without something by which we may to reduce our ideas to order by. Were we unable to generalize we should receive but little pleasure, for nothing gives us such satisfaction as to be able to trace the similarities which every where ~~exist~~ appear in the works of the Supreme. We ought to guard against making arrangement the chief object and when we have a knowledge of that suppose we are naturalist or Botanists. A man may study

Linnæus and committ his Systema Naturæ to memory, but who ~~would~~ call him a Naturalist if he could not tell you ~~what~~ where to find the place and description of the horse or the sheep, &c! and he ought not to be so denominated untill he had examined animals & vegetables & ~~can~~ have been able to discover the names & places of what were before unknown: You certainly would not consider her a proficient in cooking who could repeat a receipt Book by heart, but had never attempted to reduce her knowledge to practice. So in the science of Botany, the way to learn is to examine and make system ~~[illegible]~~ ~~[illegible]~~ ~~in the pursuit~~ of assist your researches. Nothing has been so injurious to the progress of Botany and prevented it from being considered an indispensible branch of that general knowledge which every ~~gentlem~~ Lady & gentleman should possess, but the unbecoming attire which which it is clad. However to be regretted it is absolutely necessary. The harmless defenceless ~~caterpillar~~ is dressed with what appears most formidable spines, which deter rather than invite the hungry birds.

We shall endeavour to reconcile you to the system & the hard names which are in such utter

disgrace among the ladies, by ~~tracing~~ explaining the terms as much clearly as we can & using as few as possible subject with admitted, the process of vegetation as it germinates in the seed and progresses to the perfect plant, bearing seed again, and we shall pursue the same course in our preceding lectures. The last season we commenced with the delineation Plan^m III commencing with the root, and described the stem - leaves stipulae &c - and finally we came to the seed. But the season we shall ~~first~~ shall examine the curious structure of the seed; ~~plant~~ shall sow & watch its evolution & growth into the perfect flowering plant. Then we shall commence the Delineation of the Plant (Del: Plan: Lin) beginning with the root its varieties and uses - the Stem or trunk, its peculiarities and anatomical structure, - shall mention all the appendages which belong to the stem together with the organization & uses of the leaf according to the opinion of Botanists of the Present age shall attempt to explain their functions as analogous to the lungs of animals. We then shall ~~[illegible]~~ describe the flower ~~to describe~~, not the beauty of the tints which vary infinitely upon the petals, but the important uses in the vegetable economy which they serve, in maturing the seed, We then shall notice the buds & the bulbs or the ~~[illegible]~~

or winter quarter into which the vegetable being retreats in the winter intending to show as much to the eye as may practicable throughout our course. But it will be interesting and instructive to present you a concise history of Botany and this is best done by noticing briefly the distinguished Botanists & their improvements. For a fuller account of which we would refer you to Pulteneys biography of Botanists

We shall then commence the system of Linnaeus, the Class or primary division which is founded upon the number proportion & situation of the essential parts of a flower called the stamina & pistil. The 1st to 13 orders which Classes are named from the number of stamina in which exist in the same flower with pistills. The 14 & 15 are established upon the relative proportion. The four next upon the connection with each other: The two next upon their being upon the same plant in different plants or grow upon entirely seperate Roots. The last Class is characterized by the obscurity of the flowers

Previous to commencing our subject we would recommend, to those who have not attended to the subject ~~to Botany~~, the perusal of Wakefields Botany & the article Botany in the Encyclopedia. Next you will be interested in the Letters of Rousseau to a Lady, who was learning the Science for the purpose of instructing a promising daughter. You may enquire for it under the title of Martyns Botany! for it was translated by him from the French. The Elementary works of Drs Barton & Smith cannot be too highly recommended and one or the other should be in the possession of all who mean to make any progress in Botany. Lee's Botany should lay on table as a dictionary. The Botanist of my father is merely a collection of a few numbers which were published under that title in the Boston Anthology, and which were intended as amusing papers without any of the parade of Science about them. It is by no means a scientific work nor was it intended to be such, but we flatter ourselves that you will find it amusing & instructive. As for other books, you must do as we do, get what you can, as we do.

We have recommended the art of Drawing, but there is perhaps an easier mode of preserving the ~~applants~~ plants in order to refresh our memory, and that is by forming an Hortus Siccus, dryed garden of Herbarium. Take your plants which have been collected without bruising them and lay them carefully between sheets of blotting or the common blue rapping paper, and place a moderate weight over them. If it be a specimen of a tree preserve the flower & one or two of the perfect leaves, and in all cases be careful to preserve so much of the plant & display it in such a way as to give an perfect idea of it when it lived. Open the flowers & spread the leaves so that every part may be seen. If any part be too thick cut away the under side, and if the branch be too large split up the bark & take out the wood entirely. Often it is difficult to keep down the leaves while you spread the others. Place weights upon them. Cents are the most convenient. They should be often examined lest they mould & rot. Many should not therefore be laid together. When wet they should be placed in dry papers &

and ~~laid in small~~ a few only laid together with small weights. If they lay any time without weights they will curl and dry ~~irregularly~~ roughly. After they are perfectly dry they should be gummed on paper or fixed to it.

Several Ladies who honored us the last season have preserved plants with great nicety and we publickly make of acknowledgements to those who have enriched our Herbarium by their presents, which have in some instances been very large. We have two collections made in Jersey ~~each~~ of which contain upwards of 800 specimens, not however all of different species but of the different stages of the Plant.

Visiting Gardens and collecting plants in the fields is of great advantage to those who pursue Botany, for nothing is so instructive of examinations for ones self. If you can ~~be of service to you~~ in this or in any other way command our services freely.

At our next lecture I shall commence the demonstration of the ~~seed~~ semen, after that we shall show ~~the Root~~ ~~treat~~ of the Radix or Root then of the Herb or all that part which is above the Root exclusive of the flower, & comprehending the trunk trunks the folia or L. The Fulcra or Ps – & the Hybernacula or W. G – then follows the Fructification of that which is concerned in the production of seed usually called the flower &c. and so on.

As Mr Correa will (soon) commence his course of Bot: Lecs. on Friday next we shall conform ourselves to him & Lectures on Tuesdays Thursdays and Saturdays, in the afternoon at 5. o. clock precisely

We are sorry that any Ladies should be prevented hearing the lectures from wanting company. We ~~intend~~ could wish that every one would feel the same freedom in coming into this room as into church.