NICOTIANA TABACUM. VIRGINIAN TOBACCO.

SYNONYMA. Nicotiana. *Pharm. Lond. & Edinb.* Nicotiana major latifolia. *Bauh. Pin. p.* 169. Nicotiana major ſive Tabacum majus. *J. Bauh. Hiſt. iii. p.* 629. Tabacco latifolium. *Park. Parad. p.* 363. *Raii Hiſt. p.* 713. Hyoſcyamus Peruvianus. *Gerard. Emac. p.* 357. Petum latifolium. *Cluſius. Exot. p.* 309. Herba ſancta. *Lobel. Adverſ. p.* 251. Nicotiana *(Tabacum)* foliis lanceolatis, ovatis, decurrentibus. *Miller. Dict.*

α Nicotiana major latifolia. *C. B. l. c.*
Broad-leaved Virginian Tobacco.

β Nicotiana foliis lanceolatis acutis ſeſſilibus, calycibus acutis, tubo floris longiſſimo. *Miller. Dict.*
Narrow-leaved Virginian Tobacco.*

Claſs Pentandria. *Ord.* Monogynia, *Lin. Gen. Plant.* 248.

Eſſ. Gen. Ch. Cor. infundibul. limbo plicato. *Stamina* inclinata. *Caps.* 2-valvis, 2-locularis.

Sp. Ch. N. foliis lanceolato-ovatis ſeſſilibus decurrentibus, floribus acutis.

THE root is annual, large, long, and fibrous: the ſtalk is erect, ſtrong, round, hairy, branched towards the top, and riſes five or ſix feet in height: the leaves are numerous, large, oblong, pointed, entire, veined, viſcous, of a pale green colour, without footſtalks, and follow the ſtem downwards: the bracteæ are long, linear, and pointed: the flowers terminate the ſtem and branches in looſe cluſters or panicles: the corolla is monopetalous, funnel-ſhaped, with a long hairy tube, which gradually ſwells towards the limb, where it divides into five folding acute ſegments of a reddiſh colour: the calyx is hairy, about the length of the corolla, and is cut into five narrow ſegments:

* The figure here preſented ſeems to accord very well with this variety.

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NICOTIANA TABACUM. VIRGINIAN TOBACCO.

β HYOSCYAMUS. Nicotiana. *Pharm. Lond. & Edinb.* Nicotiana major latifolia. *Bauh. Pin. p.* 169. Nicotiana major five Tabacum maius. *J. Bauh. Hist. iii. p.* 619. Tabacco latifolium. *Park. Parad. p.* 363. *Raii Hist. p.* 713. Hyoscyamus Peruvianus. *Gerard. Emac. p.* 337. Petum latifolium. *Clusius. Exot. p.* 300. Herba Indica. *Lobel. Adversf. p.* 251. Nicotiana (Tabacum) folis lanceolatis, ovatis, decurrentibus. *Miller. Dict.*

α Nicotiana major latifolia. *C. B. I. c.*

Broad-leaved Virginian Tobacco.

β Nicotiana foliis lanceolatis, acutis sessilibus, calycibus acutis, tubo floris longissimo. *Miller. Dict.*

Narrow-leaved Virginian Tobacco.*

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 252.

Sp. Gen. Ch. *Cor.* infundibul. limbo plicato. *Stamina* inclinata. *Capsula* 2-valvis, 2-locularis.

Sp. Ch. N. foliis lanceolato-ovatis sessilibus decurrentibus, floribus acutis.

THE root is annual, large, long, and fibrous: the stalk is erect, round, hairy, branched towards the top, and rises six or seven feet in height: the leaves are numerous, large, oblong, pointed, entire, veined, viscous, of a pale green colour, without footstalks, and follow the stem downwards: the bracteæ are long, linear, and pointed: the flowers terminate the stem and branches in large clusters or panicles: the corolla is monopetalous, funnel-shaped, with a long hairy tube, which gradually swells towards the limb, where it divides into five spreading acute segments, of a reddish colour: the calyx is hairy, about the length of the corolla, and is cut into five narrow segments:

* The figure here presented seems to accord very well with this variety.

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the five filaments are bent inwards, tapering, and crowned with oblong antheræ: the germen is oval, and supports a long slender style, terminated by a round cleft stigma: the capsule is oval, and divided into two cells, which contain many small roundish seeds.—It is a native of America, and flowers in July and August.

Tobacco was first imported into Europe about the middle of the sixteenth century by Hernandez de Toledo, who sent it to Spain and Portugal; at that time the Ambassador of Francis II. resided at the court of Lisbon, and in the year 1560, he carried the Tobacco into France, when it was presented to Catharine de Medicis as a plant from the new world, possessing extraordinary virtues. The Ambassador's name was Nicot, and hence the appellation Nicotiana. It appears from Lobel, that this plant was cultivated in Britain previous to the year 1570;[a] and the introduction of the custom of smoking it in England is ascribed to Sir Walter Raleigh. The cultivation of Tobacco * is now common in various parts of the globe, and though

[a] Vide l. c.

* Long, in his History of Jamaica, describes the method of its cultivation to be as follows:—" When a regular plantation of Tobacco is intended, several beds are prepared, well turned up with the hoe. The seed, on account of its smallness, is mixed with ashes, and sown upon them a little before the rainy season. The beds are then raked, or trampled with the feet, to make the seed take the sooner. The plants appear in two or three weeks. So soon as they have acquired four leaves, the strongest are drawn up carefully and planted in the Tobacco field by a line, at the distance of about three feet from each plant: this is done either with a stick or the finger. If no rain falls, it should be watered two or three times, to make it strike root. Every morning and evening the plants must be surveyed, in order to destroy a worm which sometimes invades the bud. When they are grown about four or five inches high they are to be cleaned from weeds, and moulded up; and as soon as they have eight or nine leaves, and are ready to put forth a stalk, the top is nipped off, in order to make the leaves longer and thicker. After this, the buds which sprout at the joints of the leaves are all plucked, and not a day suffered to pass without examining the leaves, to destroy a large caterpillar which is sometimes very destructive to them. When they are fit for cutting, which is known by the brittleness of the leaves, they are cut with a knife close to the ground; and after being left to lie there some little time, are carried to the drying-shed or house, where the plants are hung up, by pairs, upon lines or ropes stretched across, leaving a space between, that they may not touch one another. In this state they remain to sweat and dry. When they become perfectly dry, the leaves are stripped from the stalks, and made into small bundles, tied with another leaf. These bundles are laid in heaps, and covered with blankets. Care is taken not to overheat them; for which reason the heaps are laid open to the air from time to time, and spread abroad. This operation is repeated till no more heat is perceived in the heaps, and the Tobacco is then stowed in casks for exportation."—Vol. 3. p. 719.

prohibited by the laws of this country, ſtill the manufacture of it forms no inconſiderable branch of commerce.

The different ſorts of Tobacco and Snuffs prepared from it which are now in uſe, are to be attributed to the difference of the climate and ſoil in which it grows, and the peculiar mode of managing and manufacturing the plant, rather than to any eſſential difference in its qualities; we ſhall therefore proceed to the conſideration of the effects of Tobacco upon the body, which from its general employment deſerves particular attention; and no apology will be thought neceſſary for tranſcribing the whole of what has been lately advanced upon this ſubject by Dr. Cullen.—" Tobacco is a well-known drug, of a narcotic quality, which " it diſcovers in all perſons, even in ſmall quantity, when firſt applied " to them. I have known a ſmall quantity of it, ſnuffed up the noſe, " produce giddineſs, ſtupor, and vomiting; and when applied in diffe- " rent ways, in larger quantity, there are many inſtances of its more " violent effects, even of its proving a mortal poiſon. In all theſe " inſtances it operates in the manner of other narcotics: But along " with its narcotic qualities it poſſeſſes alſo a ſtrongly ſtimulant power, " perhaps with reſpect to the whole ſyſtem, but eſpecially with reſpect " to the ſtomach and inteſtines; ſo as readily, even in no great doſes, " to prove emetic and purgative.

" By this combination of qualities, all the effects of tobacco may " be explained; but I ſhall begin with conſidering its effects as they " appear in the uſe of it as an article of living.

" As ſuch it has been employed by ſnuffing, ſmoking, and chewing; " practices which, as having been for two hundred years paſt common " to all Europe, need not be deſcribed here. Like other narcotics, " the uſe of it may be introduced by degrees; ſo that its peculiar " effects, even from large quantities employed, may not, or may " hardly at all appear: but this does not at all contradict the account " I have given of its quality with reſpect to perſons unaccuſtomed to " it, and even of its tendency to ſhow its power in thoſe much ac- " cuſtomed to it: for even in theſe, the power of habit has its limits; " ſo that in perſons going but a little beyond the doſe to which they " have been accuſtomed, very violent effects are ſometimes produced.

" On this ſubject it is to be remarked, that the power of habit is " often unequal; ſo that in perſons accuſtomed to the uſe of tobacco,

" a leſſer

" a leſſer quantity than what they had been accuſtomed to, will often
" have ſtronger effects than had before commonly appeared. I knew
" a lady who had been for more than twenty years accuſtomed to
" take ſnuff, and that at every time of day; but ſhe came at length
" to obſerve, that ſnuffing a good deal before dinner took away her
" appetite: and ſhe came at length to find, that a ſingle pinch, taken
" any time before dinner, took away almoſt entirely her appetite for
" that meal. When, however, ſhe abſtained entirely from ſnuff before
" dinner, her appetite continued as uſual; and after dinner, for the reſt
" of the day, ſhe took ſnuff pretty freely without any inconvenience.

" This is an inſtance of the inequality of the power of habit in
" exerting its effects: but in what caſes this may take place, we
" cannot determine, and muſt now go on in marking its uſual and
" ordinary powers. When ſnuff, that is, tobacco in powder, is firſt
" applied to the noſe, it proves a ſtimulus, and excites ſneezing; but
" by repetition that effect entirely ceaſes.

" When ſnuff is firſt employed, if it be not both in ſmall quantity
" and be not thrown out immediately by ſneezing, it occaſions ſome
" giddineſs and confuſion of head; but by repetition theſe effects
" ceaſe to be produced, and no other effect of it appears in the
" accuſtomed, when not taken beyond the accuſtomed quantity. But
" even in the accuſtomed, when it is taken beyond the uſual quantity,
" it produces ſomewhat of the ſame giddineſs and confuſion of head
" that it did when firſt employed; and in ſeveral caſes, theſe effects
" in the accuſtomed, depending on a larger doſe, are not only more
" conſiderable, as they act on the ſenſorium, but as they appear alſo
" in other parts of the ſyſtem, particularly in the ſtomach, occa-
" ſioning a loſs of appetite, and other ſymptoms of a weakened tone
" in that organ.

" With reſpect to this, it is to be obſerved, that perſons who take
" a great deal of ſnuff, though they ſeem, from the power of habit,
" to eſcape its narcotic effects; yet as they are often liable to go to
" exceſs in the quantity taken, ſo they are ſtill in danger from theſe
" effects operating in an inſenſible manner; and I have obſerved
" ſeveral inſtances of their being affected in the ſame manner as
" perſons are from the long continued uſe of other narcotics, ſuch as
" wine and opium; that is, by a loſs of memory, by a fatuity, and

" other

" other ſymptoms of the weakened or ſenile ſtate of the nervous " ſyſtem, induced before the uſual period.

" Among other effects of exceſs in ſnuffing, I have found all the " ſymptoms of dyſpepſia produced by it, and particularly pains of the " ſtomach, occurring every day. The dependance of theſe upon the " uſe of ſnuff became very evident from hence, that upon an acci- " dental interruption of ſnuffing for ſome days, theſe pains did not " occur; but upon a return to ſnuffing, the pains alſo recurred; and " this alternation of pains of the ſtomach and of ſnuffing having " occurred again, the ſnuff was entirely laid aſide, and the pains " did not occur for many months after, nor, ſo far as I know, for " the reſt of life.

" A ſpecial effect of ſnuffing is its exciting a conſiderable diſcharge " of mucus from the noſe; and there have been ſeveral inſtances of " headachs, toothachs, and ophthalmias relieved by this means: and " this is to be particularly remarked, that when this diſcharge of " mucus is conſiderable, the ceaſing or ſuppreſſion of it by abſtaining " from ſnuff, is ready to occaſion the very diſorders of headach, " toothach, and ophthalmia, which it had formerly relieved.

" Another effect of ſnuffing to be taken notice of is, that as a part " of the ſnuff is often carried back into the fauces, ſo a part of this " is often carried down into the ſtomach, and then more certainly " produces the dyſpeptic ſymptoms mentioned. Theſe are the con- " ſiderations that relate to ſnuffing; and ſome of them will readily " apply to the other modes of uſing this drug.

" Smoking, when firſt practiſed, ſhows very ſtrongly the narcotic, " vomiting, and even purging powers of tobacco, and it is very often " uſeful as an anodyne; but by repetition theſe effects diſappear, or " only ſhow themſelves when the quantity ſmoked is beyond what " habit had before admitted of; and even in perſons much accuſtomed " to it, it may be carried ſo far as to prove a mortal poiſon. From " much ſmoking all the ſame effects may ariſe which we ſaid might " ariſe from exceſs in ſnuffing.

" With reſpect to the evacuation of mucus which is produced by " ſnuffing, there are analogous effects produced by ſmoking, which " commonly ſtimulates the mucous follicles of the mouth and fauces, " and particularly the excretories of the ſalivary glands. By the

" evacuation

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" evacuation from both ſources, with the concurrence of the narcotic " power, the toothach is often greatly relieved by it; but we have " not found the ſmoking relieve headachs and ophthalmias ſo much " as ſnuffing often does. Sometimes ſmoking dries the mouth and " fauces, and occaſions a demand for drink; but, as commonly the " ſtimulus it applies to the mucous follicles and ſalivary glands draws " forth their liquids, it occaſions on the other hand a frequent ſpitting.

" So far as this is of the proper ſaliva, it occaſions a waſte of that " liquid ſo neceſſary in the buſineſs of digeſtion; and both by this " waſte and by the narcotic power at the ſame time applied, the tone " of the ſtomach is often weakened, and every kind of dyſpeptic " ſymptoms are produced. Though in ſmoking a great part of the " ſmoke is again blown out of the mouth, ſtill a part of it muſt " neceſſarily paſs into the lungs, and its narcotic power applied there " often relieves ſpaſmodic aſthma; and by its ſtimulant power it there " alſo ſometimes promotes expectoration, and proves uſeful in the " catarrhal or pituitous difficulty of breathing.

" Smoking has been frequently mentioned as a means of guarding " men againſt contagion. In the caſe of the plague, the teſtimony of " Diemerbroek is very ſtrong; but Rivinus and others give us many " facts which contradict this: and Chenot gives a remarkable inſtance " of its inutility. We cannot indeed ſuppoſe that tobacco contains " an antidote of any contagion, or that in general it has any antiſeptic " power; and therefore we cannot allow that it has any ſpecial uſe " in this caſe: but it is very probable that this and other narcotics, " by diminiſhing ſenſibility, may render men leſs liable to contagion; " and by rendering the mind leſs active and anxious, it may alſo " render men leſs liable to fear, which has ſo often the power of " exciting the activity of the contagion. The antiloimic powers of " tobacco are therefore on the ſame footing with thoſe of wine, " brandy, and opium.

" The third mode of uſing tobacco is that of chewing it, when it " ſhows its narcotic qualities as ſtrongly as in any other way of ap- " plying it; though the nauſeous taſte of it commonly prevents its " being carried far in the firſt practice. When the practice, however, " is continued, as it is very difficult to avoid ſome part of it diſſolved " in the ſaliva from going down into the ſtomach, ſo this, with the

" nauſea excited by the taſte, makes vomiting more readily occaſioned
" by this than the other modes of applying it. They are the ſtrong,
" and even diſagreeable impreſſions repeated, that give the moſt du-
" rable and tenacious habits; and therefore the chewing of tobacco
" is apt to become one of theſe: and it is therefore in this way that
" it is ready to be carried to the greateſt exceſs, and to ſhow all the
" effects of the frequent and large uſe of narcotics. As it commonly
" produces a conſiderable evacuation from the mouth and fauces, ſo
" it is the moſt powerful in relieving the rheumatic affection of
" toothach. This practice is alſo the occaſion of the greateſt waſte
" of ſaliva; and the effects of this in weakening digeſtion, and perhaps
" from thence eſpecially, its noted effect of producing emaciation
" may appear.

" Theſe are the effects of the different modes of employing tobacco,
" when it comes to be of habitual uſe and an article of living. Theſe
" effects depend eſpecially upon its narcotic power, and certain cir-
" cumſtances accidentally attending its application to the noſe and
" mouth: but as we have obſerved before, that beſide its narcotic, it
" poſſeſſes alſo a ſtimulant power, particularly with reſpect to the
" alimentary canal: by this it is frequently employed as a medicine
" for exciting either vomiting or purging, which it does as it happens
" to be more immediately applied to the ſtomach or to the inteſtines.

" An infuſion of from half a dram to a dram of the dried leaves, or
" of theſe as they are commonly prepared for chewing, for an hour
" or two, in four ounces of boiling water, affords an emetic which has
" been employed by ſome practioners, but more commonly by the
" vulgar only. As it has no peculiar qualities as an emetic, and its
" operation is commonly attended with ſevere ſickneſs, it has not been,
" nor is it likely ever to come into common practice with phyſicians.

" It is more commonly employed as a purgative in glyſters; and,
" as generally very effectual, it is employed in all caſes of more
" obſtinate coſtiveneſs; and its powers have been celebrated by many
" authors. I have known it to be in frequent uſe with ſome practi-
" tioners; and it is indeed a very effectual medicine, but attended
" with this inconvenience, that when the doſe happens to be in any
" exceſs, it occaſions ſevere ſickneſs at ſtomach; and I have known
" it frequently occaſion vomiting.

It

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" It is well known, that in cases of obstinate costiveness, in ileus " and incarcerated hernia, the smoke of burning tobacco has been " thrown into the anus with great advantage. The smoke operates " here by the same qualities that are in the infusions of it above " mentioned; but as the smoke reaches much further into the intes- " tines than injections can commonly do, it is thereby applied to a " larger surface, and may therefore be a more powerful medicine " than the infusions. In several instances, however, I have been " disappointed of its effects, and have been obliged to have recourse " to other means.

" The infusion of tobacco, when it is carried into the blood-vessels, " has sometimes shown its stimulant powers exerted in the kidneys; " and very lately we have had it recommended to us as a powerful " diuretic of great service in dropsy. Upon the faith of these recom- " mendations we have now employed this remedy in various cases of " dropsy, but with very little success. From the small doses that are " proper to begin with, we have hardly observed any diuretic effects; " and though from larger doses they have in some measure appeared, " we have seldom found them considerable: and when, to obtain " these in a greater degree, we have gone on increasing the doses, " we have been constantly restrained by the severe sickness at stomach, " and even vomiting, which they occasioned: so that we have not " yet learned the administration of this remedy so as to render it a " certain or convenient remedy in any cases of dropsy.

" The same circumstances have occurred to several other practi- " tioners of this city and neighbourhood; and of late the trials of it " have been very generally omitted, owing perhaps to our practitioners " being directed at the same time to the use of the digitalis, with which " they have had some more success.

" From some experiments we are certain that tobacco contains a " quantity of volatile parts that may be dissipated by long boiling in " water; and that by such a practice its emetic, purgative, and nar- " cotic qualities may be greatly diminished; and we are of opinion " that the preparation in extract, as prescribed in the Wirtenberg " dispensatory, is upon a good foundation, and may be employed in " pectoral cases with more advantage and safety than the simple in- " fusion or decoction made by a short boiling only.

" When

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" When we were restrained in employing the infusion of tobacco " as a diuretic, as mentioned, we expected to succeed better with the " decoction; and I have found, that by long boiling this might be " given in much larger doses than the infusion: but we still found it " retaining so much of the emetic quality, that we could not employ " it as a diuretic without being interrupted in its use by the same " emetic quality that had interrupted the use of the infusion.

" Besides the internal uses of tobacco mentioned, I must now " remark, that it has likewise been commended for its virtues as " externally employed. I have known the infusion employed with " advantage as a lotion for some obstinate ulcers: but the many in- " stances of its being absorbed, and proving thereby a violent poison, " dissuade from such a practice; especially as there are other medi- " cines, of as much efficacy, that may be employed with much " more safety. Bergius recommends it to be employed as a fomen- " tation in the paraphymosis; but we have had no opportunity of " employing it." *

* The preceding quotation has completely anticipated what we have to offer upon the subject of Tobacco. Respecting its poisonous, or narcotic, effects, we shall subjoin the following references: — *Ephem. Nat. Cur. Dec.* 2. *Ann.* 10. *Obs.* 131. *p.* 222. we are told, that by the immoderate use of snuff, somnolency, and at length fatal apoplexy, was induced. *Hellwig Obs. Phys. Med. p.* 45. gives two instances of the same kind, occasioned by smoking 17 or 18 pipes of Tobacco. For the effects of Tobacco, by absorption from its external use, see *Eph. cit. Ann.* 4. *p.* 46. *et Ann.* 2. *Obs.* 108. *p.* 262. *Alston's M. M. vol. ii. p.* 190. The oil of Tobacco, applied to a wound, is said by Redi to be as fatal as the poison of a viper. See *Experim. Nat. p.* 8. 50. 315. Albinus however did not find that this was the case with the different animals on which he tried the experiment. *Diss. de Tobac. p.* 11. This oil, given to pigeons, produced fatal effects, and was constantly attended with vomiting. *Abbé Fontana. Vide Phil. Trans. vol. lxx.* Tobacco, taken by dogs, also produces vomiting. *Gesner. Epist. lib. ii. p.* 79. The smoke of Tobacco has been successfully used in the way of injection, by means of a proper instrument, for obstructions and inveterate constipations of the belly, ever since the time of Sydenham; and Haen, in his Rat. Med. gives several instances of its good effects: it is also recommended in cases of asyphxia, or, what has been termed, suspended animation.

ERRATUM. In the description of the calyx of the Tobacco-plant, read *half* the length of the corolla.

RICINUS COMMUNIS.

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