

The virtues of wild valerian in nervous disorders ... With directions for gathering and preserving the root; and for chusing the right kind when it is bought dry. Shewing that the uncertainty of effect in this valuable medicine, is owing to adulteration or ill management / [John Hill].

Contributors

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THE
V I R T U E S
OF
V A L E R I A N.

By D^R H I L L.

THE
VIRGIL

AND
MILTON

BY
D. H. L.

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THE
V I R T U E S
O F
WILD VALERIAN
I N
NERVOUS DISORDERS;

AND THE MANNER OF TAKING IT,
Against VAPOURS and MELANCHOLY, as Tea;
Against FITS, and HYSTERIC COMPLAINTS, in the Powder;

A N D
Against CONFUSED THOUGHTS, and PARALYTIC
COMPLAINTS, in the Tincture.

WITH DIRECTIONS
For Gathering and Preserving the ROOT;

A N D
For chusing the right Kind when it is bought dry.

SHEWING THAT
The Uncertainty of Effect in this valuable MEDICINE,
is owing to Adulteration or ill Management.
Illustrated with FIGURES; exhibiting the true and false
Root, and the entire PLANTS.

THE TWELFTH EDITION.

BY J. HILL, M. D.
MEMBER OF THE IMPERIAL ACADEMY.

L O N D O N :

Printed for R. BALDWIN, in Pater-noster-Row; J.
RIDLEY, in St. James's-Street; and E. and C. DILLY,
in the Poultry.

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THE
V I R T U E S
O F
WILD VALERIAN.

CHAP. I.

Of the Nature of the Root.

PHYSICIANS find uncertainty in the effects of Valerian; and the medicine has of late lost some part of its credit: I beg they will receive from me, (who have considered plants with some attention) the following reasons: and when the causes of that uncertainty are shewn, the remedy will be easy.

It is by the application to such purposes botany becomes useful to mankind; and 'tis a common misfortune the science is so little cultivated in England. Some should en-

quire with strictness into the state of drugs; and determine with equal freedom against ignorance and fraud. This cannot be expected from the physicians; for the superior care of health does not allow them leisure: the age is not deficient in HIPPOCRATES's; but there wants a *Crataevus*.

By VALERIAN, druggists understand the root of the large English plant of that name: its superior virtues having, in a great measure, banished the other kinds.

This is a common wild herb: it grows on heaths, by rivers, and in woods: but it does not, in all these places, possess equally its virtues.

When in perfection, it is of the aromatic kind: now we know such qualities depend, in a great measure, on sun and air; and are impaired always, and often destroyed utterly, by shade and water. Therefore the roots of Valerian which have grown upon dry hills and sun-burnt heaths, possess its virtues in the highest degree; and such only should be used in medicine.

Unluckily the plant is more common by waters than on heaths; and the roots are in wet places larger and more easily taken up. A pound of these is brought into the shops
for

for every dram of the other: and as they are greatly inferior in their qualities, the physician is disappointed who depends on them.

Not only the virtues; but the stature, colour, and whole aspect of the plant are altered by this watery nourishment: and though in reality these are only varieties, occasioned in the common course of nature, by the different soil; and seen in other herbs as well as this; yet they are so considerable in the present instance, that Ray and others have given the heath or mountain Valerian, a distinct place in their catalogues of plants; accounting it a really different species from that growing by waters.

In woods it assumes a form distinct from both; and properly is of a middle kind between them. Its virtues are also of a middle degree; inferior to the heath, and superior to those of the water Valerian.

The excellence of the first of these kinds is such, that no other should be used; and there is enough of it for the demand: so the gathering the wrong kind should be discouraged. The distinction is obvious, as will appear by the succeeding characters: and as the term WILD belongs equally to the wood and water kinds, as well as the true, per-
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haps

haps it will be proper to distinguish that hereafter, by the name **HEATH VALERIAN**.

As all the three are in reality only varieties, or different states of the same species of plant, one general description will serve for it, in all those states; and after its form and characters are thus understood, it will be the easier to explain the particular distinctions under those three several appearances.

C H A P. II.

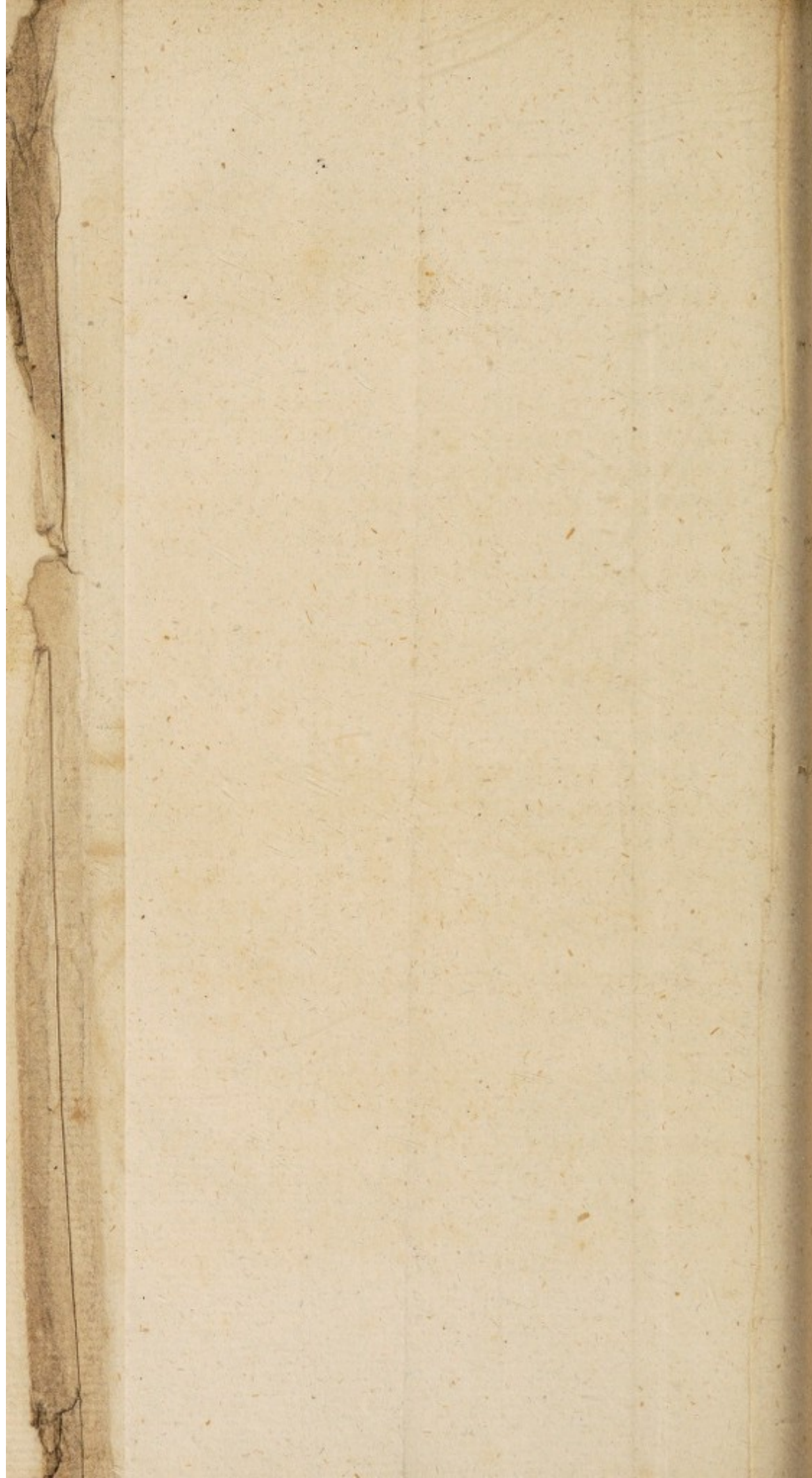
Description of the Plant.

THE root of wild Valerian is composed of many long fibres; joined to a small head. The stalk is erect, round, and hollow. The leaves stand in pairs; and each is composed also of many pairs of small leaves joined to a long rib, with an odd one at the end. The flowers are small and reddish; and they stand in large tufts at the top of the stalk and branches. Each flower, as in the other Valerians, is formed of one piece; and is tubular at the base, swelled out on one side; and cut into five parts at the rim. It has no cup; and it is followed by a single seed.

This is the form and figure of the plant; in whatever soil or situation it grows: but the



TRUE WILD VALERIAN



the distinctions of the heath from the water Valerian, tho' they do not affect the specific character, are sufficiently striking and obvious, to serve the purposes of those who gather the root for medicine.

The TRUE HEATH VALERIAN is about two feet and a half high. The stalk is of a dusky green, and lightly hairy: the leaves are smaller than in the water kind; and the little leaves of which each of the larger is composed, are narrower, and of a deeper green. They are also covered with fine white hairs: the flowers are of a brighter red; and the clusters of them are smaller. The seed also is smaller, and harder than in the other.

The WATER VALERIAN is known by its taller stature, and more specious appearance. It is four feet high. The stalk is of a pale green, and thick; the leaves are large, smooth, broad, and also of a fresh pale green. The flowers are paler; but larger, and more conspicuous than in the other; and the seed is larger and softer.

This is the distinction of the plants when at full growth: but as the best time of gathering the root is before the stalk rises, it is necessary they should be known asunder also in that state.

The

The place of growth is indeed sufficient for this purpose: for no one would go to gather the root by a river side, when he has been told the Water Valerian is of less value: but that those who have not opportunities of taking it up themselves, may have some mark by which to know it genuine, it will be proper to add, that many such leaves as we have described on the stalk, rise also immediately from the root; and the same distinction is preserved in them: these in the Heath Valerian, are composed of narrower parts; and are hairy and dusky in colour; those of the Water Valerian, are bright, smooth, and pale.

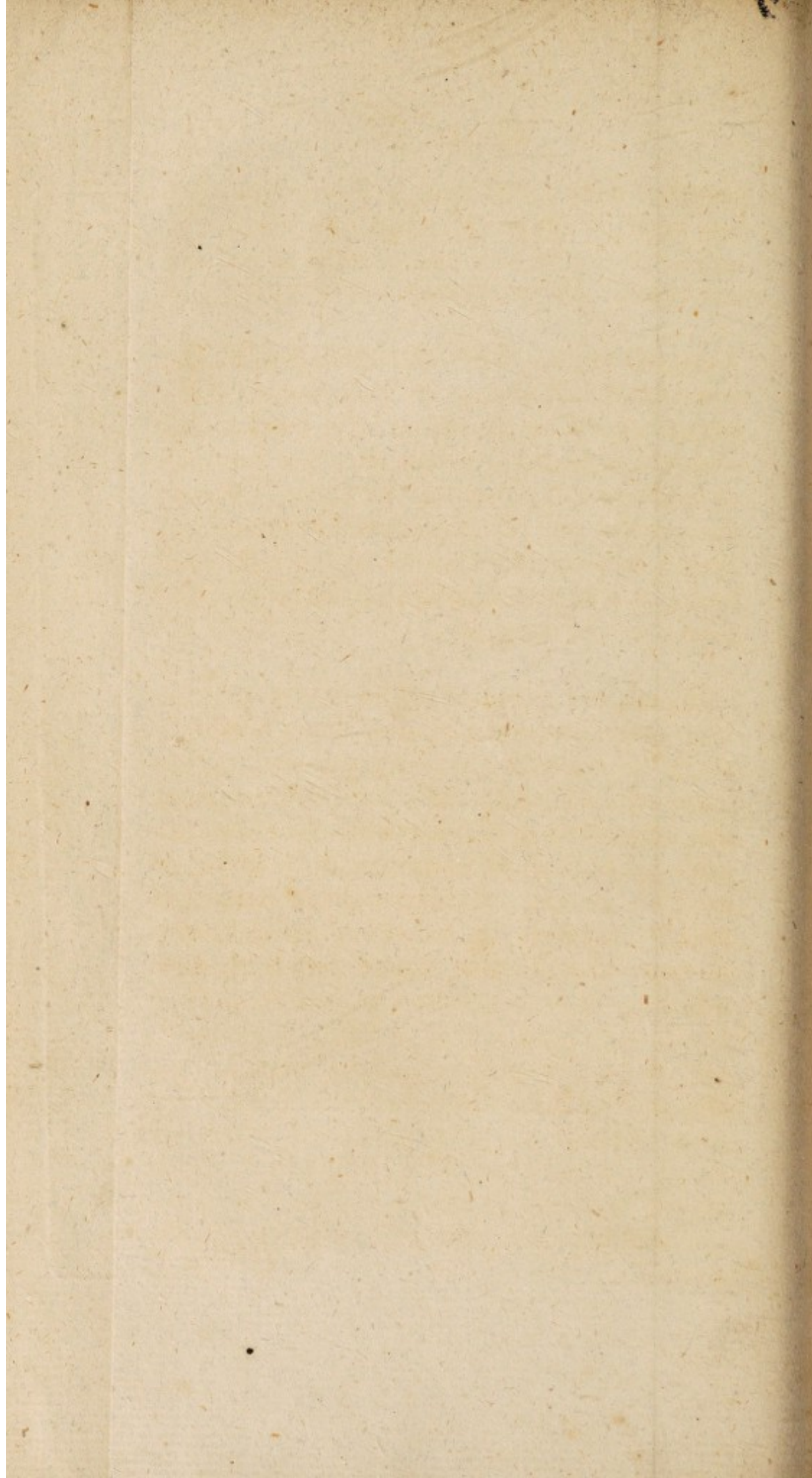
The great distinction lies in the root itself. This in the true heath kind, is of a fine brown colour, tending to olive; and consists of long slender fibres, which have a multitude of smaller threads growing from their sides in the manner of short curled hairs.

The root of the Water Valerian, is of a pale brown tending to yellow; and is composed of thicker and more naked fibres.

The root of the Heath Valerian is firm and tough; the root of the water kind is tender and more easily broken. The Heath Valerian root has a fresh and aromatic scent,
together



WATER VALERIAN



together with a fœtidness. The water kind has nothing of this freshness in the scent, and little of the aromatic; but is in a manner heavy, and fœtid only.

By these characters and distinctions, the two plants will be known from one another; in whatever state or period of growth: and even the fresh roots when they are brought in without any part of the plant. But as the greater part of those who are concerned have not opportunities of seeing the root fresh, it will be essential to observe its condition at the druggists.

These are supplied with it by persons who want knowledge; and often honesty: there is therefore no dependance, except upon the absolute form of the root: and the distinction in this article is the more necessary; because the plant must be wild, to have its virtue. Garden culture debases it almost as much as a watery nourishment abroad: this I have found by trial: and where a drug must be received from such hands, as usually deal in this, it is necessary to be very well acquainted with its genuine characters.

C H A P. III.

The History of the Valerian of the Druggists.

THE Valerian Root sold at our druggists is collected by a particular set of people; a kind of itinerant medicine-mongers, whom (from the principal article in which they deal) we call VIPER-CATCHERS: these people, who travel over the greatest part of the kingdom in search of those animals, collect also saffron, Valerian roots, and some few other articles.

As they find a hundred plants of the Water Valerian for one of the heath or wood kind, that is the root many of them usually collect: if the other falls in their way, and will come easily out of the ground, as it will in the looser heath soils after rains, they mix it with the rest: if not, they let it entirely alone: so that we sometimes meet with great quantities of the water kind only; and sometimes a mixture of one and the other.

The first should be refused entirely, and the latter carefully picked. Besides this mixture, they put in also the roots of a small Meadow Valerian, a distinct species of plant: and sometimes other roots less pardonably.

I have

I have raised at Bayswater a plant of the smooth water Crowfoot, which is poisonous, from a root sold among Wild Valerian.

Even this careless and dangerous mixture is not all the disadvantage we suffer in receiving the drug from such hands. The time when roots have their full virtue is before they shoot up a stalk; and in such state all that are intended for medicine should be gathered: but the plant is most obvious when in flower; the root at that time is looser in the ground, and the stalk is a handle by which it is easily pulled up.

For these reasons a great part of what is brought into the shops has been taken out of the ground when the plant was in flower; and is therefore, even though the kind were right, unfit for use in medicine. Of all these imperfections the druggist should beware, for his care may make the gatherers honest: if he is negligent, the apothecary should refuse to take such as is bad into his shop: and in case of both being careless, the patient should examine the root himself, according to the following characters.

C H A P. IV.

Description of the false Valerian Root.

THE FALSE, or WATER VALERIAN ROOT, which is by much the most common; when dry, is *brittle*, and of a pale brown, approaching to *yellowish*; it is composed of many rounded fibres, often entirely *naked*; or at the best hung with a very few threads: and at the head where these fibres unite, there are commonly seen the *remains* of the bottom of a *stalk*; with a hollow equal to that of a goose-quill. Among the true fibres of the root, are also seen several long and *thick strings* of a paler colour; and *jointed* with a kind of dent at each joint. These are the creeping appendages of the root, by which it runs under the surface: they have partly the nature of roots, partly of stalks: but are as destitute of virtue as so many straws. When the real fibres are tasted, they are a little acrid, but *faint*; and a foetid scent is perceived while we are chewing them. If they are broken, they appear *hollow* in the midst; or at the best dark and *blackish*. In the first case, the pith of the root is consumed, which is the common state of it after the plant has flowered: the other is the natural condition of

of the root in watery places; and the certain sign of its wanting strength.

The substance which furrounds the pith in the Valerian root, contains its greatest virtue. This is the Corona, or circle of propagation*: it is spongy and woody in the Water Valerian, but in the heath kind, it is firm and oily. It contains a substance approaching to the nature of a gum-resin; and this the watery nourishment cannot supply: it is therefore this part in the Water Valerian is so easily perishable, which in the other is permanent.

C H A P. V.

Description of the true Heath Valerian Root.

THE TRUE HEATH VALERIAN Root is composed of longer and slenderer fibres than the other; and is *tough*, and of a *dusky brown*, approaching to *olive* colour: the fibres are all hung with *numerous threads*: when broken, they have no hollow in the centre, nor any blackish circle there, but appear full and bright; and if the root has been gathered in perfection, there is a cir-

* See Construction of Timber by the Microscope, Octavo, 1771.

cle of a greenish or pale hue surrounding the pith. This is the Corona before mentioned, and contains the full virtue of the plant.

The taste of this root differs from the other much more than the colour or form : it is highly aromatic, and really agreeable. It is not without the foetid hogoe of the other ; but the aromatic flavour overcomes it.

This is the root, and this only, which should be gathered for medicinal use, and it is indeed a very valuable and noble medicine. A physician of distinguished abilities, one of the censors of the college, has told me, that in a late search they found this true Valerian Root at one, and only one shop in London : the powder of it was of an olive brown, and the scent aromatic and agreeable : at other places, the powder was of a yellowish brown, and the smell offensive.

This true kind is liable, like the false, to have those runners mixed among the real fibres, and they should be separated : it also will shew when the plant has been in stalk at the time of its being gathered ; and in that state should be rejected. 'Tis only in perfection when it is preparing for shooting
up

up a stalk: and whoever will gather it at that time, will find one instance that this kingdom can afford drugs equal to those of the warmest climates.

CHAP. VI.

Farther Trials of the two Roots.

THE Valerian Root is sometimes altered in colour, though not greatly, from the foulness left about it at the time of gathering; or from the ill management in drying. In this case, as it is the colour that first strikes the eye, if the judgment be perplexed in that article, let some of the root be put into cold water, and stand twenty-four hours. This never fails to distinguish the Water plant from the Heath kind; for the Water Valerian root becomes yellower, as it swells, and the other more of the olive brown, than it was while dry.

The scent of the two roots will also distinguish them ; if they have not lain together : the true is really fragrant, though with a mixture of the fœtid kind ; the other absolutely stinks ; and has scarce any thing of an aromatic scent mixed with this ill favour.

Cats, who have much more distinguishing
B organs

organs of smell than we, plainly perceive, and shew this. There are certain scents which affect them, and they are principally of the fœtid kind; though not without exception: they will busy themselves extremely about the Water Valerian root; but shew little regard to the other.

C H A P. VII.

Of gathering the Root.

SUCH are the characters by which the true Heath Valerian Root is to be known from the false kind, usually sold under its name; and when a parcel of this is found in the hands of those people who deal in it, before it is used, it should be picked, and cleansed: those roots which shew they have borne a stalk, are to be rejected, and the runners, or jointed and light strings, must be picked away from the true fibres. Thus the druggist will be sure he sells what the doctor prescribes: but there still remains a doubt about its value. The high flavour of the Valerian root is lost in long keeping; and when that is gone, the virtue is in great part lost with it.

This root should never be used when it is more than one year old from gathering; and the seller's word is not to be taken on this account;

account; for he is always interested to call the old new.

Under these disadvantages, to which the purchase of Valerian is subjected on all hands, nothing can be so rational as the patient's gathering it for himself. Where he has the convenience of doing this, let it not be omitted; and where that is wanting, let him guide himself by the same rules in the purchase, that he would observe in the collecting it.

Let him buy it only fresh; only at a certain season of the year; and only in its perfect state and condition: this he will know by the following rules.

Roots are in their full vigour, and possess their virtues in greatest perfection, when they are ready for shooting up a stalk; but have not yet made the effort. Till this time they are imperfect, because they have not obtained their full maturity; and after this they are exhausted.

The ultimate end of nature in the growth of plants, is the formation of the seeds: when these are perfected, the root is no longer useful; and it becomes a stick: even while the stalk is in its growth, the rich juices are sent up so fast to it, that the root is

drained in great part of them. Therefore, neither when the plant is in flower, nor when it is about to flower, should its root be gathered for medicinal purposes. While it has only the radical leaves it may : but the best time of all is just when the bud of the stalk is forming.

The growth of the Valerian is this : in July it flowers ; in August the seeds are ripe, and the winds carrying them off, they strike root, when they fall upon a favourable ground. The rains of autumn favour this ; and a small cluster of leaves is soon formed ; and these, with the root, continue growing till the severest frosts ; or, in mild winters, through the whole season.

At the same time that the seeds fall, those runners before-mentioned, rising from the head of the old roots, spread themselves just under the surface, or sometimes upon it ; and taking root at their ends, they also form new plants : each shooting up a cluster of leaves, and sending fibres into the earth, just as the seedlings.

Among the dried roots we buy at the druggists, some are large and light ; others small and more firm : the large ones are often such as have been pulled up by the stalk, at, or after the time of flowering, in
July

July or August, which are therefore in a great degree exhausted. The small ones are the roots of seedling plants, and of those propagated by the runners, which have been taken up late in autumn, or early in spring; and having been but in their earliest state of growth, have not their full virtues.

This is the condition of the single roots brought to sale; and in the clusters of them, there is the greatest uncertainty, the larger part being exhausted, and often rotten; and the rest imperfect.

This excludes the greatest part of the year from the time of the gathering of Valerian root. The true season is the middle, or end of May, and the beginning of June: and the finest roots are those of seedling plants.

These are known by standing single; those from the runners being always near the old roots.

These seedlings have had the autumn and winter for taking their first growth, and establishing themselves in the ground; the warmth and moisture of spring have given them their full bigness; and toward the end of May, the rudiment is formed, which is to shoot up into a stalk: the root is now full of its richest juice. This is the proper season for gathering it; and the common

rules in these cases, which direct autumn and spring, are equally wrong. Every last year's plant of Valerian will flower in July, and therefore will be exhausted in autumn; and the spring plants are too small and imperfect for service.

Therefore the last ten days in May, and the first fifteen of June, are the proper time: this is a period of about three weeks, and it is sufficient: the root should not be taken up at any other time; and those who buy should never receive it in any state but fresh; nor at any season except this.

In the system of vegetation, this is an universal truth: the root which has produced a stalk, and ripened flowers and seeds, becomes an absolute chip; and has neither medicinal qualities nor any other value. In the bulbous kinds it decays visibly; and in the fibrous it has the same fate, though less observed. The carrot which has run to seed, is a hard, insipid stick; and in the potatoe, though fresh roots are produced abundantly, that which was put into the ground in spring, and which has borne the summer stalk, is useless.

The gardener thinks he takes up in July the same bulb of the tulip, which he planted in November; but he deceives himself: that which he plants in autumn furnishes the
flower

flower in the succeeding summer; and as it feeds the stalk, decays. Another bulb is formed during this time; which contains the rudiment of the next year's flower: this encreases as the other decays; and having attained its full growth by the middle of summer, the gardener takes it up; and supposes it the same he planted.

What we call a bulbous root is no more than a covering of the rudiment of the plant; as the bud upon a tree: and the coats of the bulb, like the films which compose the bud, when they have performed their office, decay, and are renewed no more.

The rudiment of the Valerian plant is a bud in the centre of the head of the root, of the same kind with the other two; and the root itself has the same fate. It naturally perishes when the plant has perfected its seeds; and others are formed round about it, which supply its place, and multiply the plant.

All this is transacted by nature in the bosom of the earth; and at a time when roots are never taken up by the judicious: therefore it is little seen: but it is the absolute course of nature. The off-sets of bulbs; and the encreased parts of fibrous roots, which the gardener separates at autumn;

are all formed in this manner : containing the rudiments of new plants, and supplying the place of the old roots, which decayed in flowering.

It is necessary so much should be known, to direct us in the proper gathering of medicinal roots ; and thus the philosophy of plants serves the purposes of medicine.

C H A P. VIII.

The Manner of curing Valerian Root.

THE Root being gathered in perfection, the next care is to cure it. Many have thought it had most virtue fresh ; but though very fine in that state ; it is finer by far when new dried in a proper manner.

The curing of medicinal roots, is a subject we do not rightly manage in England. The Ginseng of the East-Indies, and the Salep of the Turks, are instances that they have an art, in general unknown to us : we cannot preserve any root as they do Ginseng ; and with regard to Salep, the root of our own Orchis, would perfectly answer its purpose, if we had the same method of preparing it. This is not indeed so difficult as may be thought, but it would be wandering from the

the present purpose, to speak farther of it here.

When the Valerian roots are gathered, let the dirt be shook from among them; but not by striking them against hard substances. It will shake out with little violence; and they must neither be bruised nor washed.

Let the leaves and runners be cut off clean, without wounding the head of the root; and lay the whole parcel in a heap in an airy place, where the sun does not come: cover them with a blanket, and leave them thus four days: then string them up on long threads, at ten inches distance root from root, and hang these threads across an airy room, where the sun does not shine.

When they are perfectly dry, shake off the rest of the dirt, which remained about them in the first clearing, and put them up in boxes; pressing them close together, and covering them carefully.

Those who are unaccustomed to the thought of laying the fresh root in heaps, before it is hung up to dry, may be reminded of the custom in regard to fruits; whether they be intended for keeping, or for wine. Those who understand their management, always give them a sweating of this kind; for
heightening

heightening their flavour, and improving their natural qualities.

The intelligent gardener lays his pears in a heap, and covers them thus with flannel, before he spreads them to preserve for winter. In the cyder countries, apples are treated also in the same manner before pressing; and in the wine countries, grapes.

In all these cases, a slight fermentation is brought on by the warmth of the substances; and their flavour and virtues are exalted and improved. I don't know that the same practice has been applied to roots before; but the effect is similar: and those who have not been accustomed to Valerian otherwise than as seen in the shops, would scarce suppose the root they prepared to be the same medicine: it is highly aromatic, quick, and pungent on the tongue; and the peculiar flavour in it, which we call fœtid, scarce deserves so coarse a name.

That the root of Heath Valerian in this state possesses all the virtues which have been ascribed to it, there is no doubt: whether it be taken as tea, or in powder: and the tincture of it is a sovereign medicine in all the worst nervous disorders. From experience, I can also affirm, that it exceeds all the Remedies commonly used against that
worst

worst of head-achs, which arises from attention.

The most agreeable method of taking it is in the form of tea; an infusion of the root in boiling water, made stronger or weaker as the occasion requires, is not unpleasant; and the addition of a little milk and sugar may be allowed, as in common tea, to disguise the flavour. Thus it is a great medicine against drooping, faintness, vain terrors, idle apprehensions, and causeless melancholy.

It will be best to take the dose at once, not cup by cup, as tea; which is drank merely for pleasure: and in order to give more strength to the infusion, where that is required, the method should be by adding to the quantity of the root; not by letting it stand longer: a common proportion may be this; chop to pieces with scissars half a dram of the dry'd root; pour upon it half a pint of boiling water, cover it up; and when the liquor is near cold, pour it off clear, and sweeten it with fine sugar, adding the milk in moderate quantity. This may be drank every morning, so long as the occasion continues; and in cases not too obstinate, or perplexed with other symptoms, great good may be expected from it without further help. Twenty grains of a powder of the
same

same root will give infinite relief in the worst hysteric complaints; but the greatest virtue is in the tincture *.

With regard to the roots sold by the druggists, they differ also extremely in colour, taste, smell, and qualities, as they have been gathered in more or less favourable situations, and soils: the whole difference between the false and the true root, is indeed that the one has grown in a barren and dry soil, and the other in a wet and muddy one; and in consequence there are as many degrees of excellence or defect in the drug, as there are of soils between those two.

The plant that will grow in each of these extremes, will certainly live in any soil of an intermediate kind; and the druggist will always find the roots offered to him by the collectors to be of various nature; according to the places whence they are brought.

* A gentleman of 49, a clergyman, found all at once a loathing of life; and a hatred of every thing. He provided a curate; himself wandered about the fields, or was locked up in his study: he grew morose, refused to speak, shunned his wife and children; and could scarce be prevailed upon to eat. Anxiety and restlessness of mind possessed him; he trembled; and one side was less alive than the other: he would often shed abundance of tears, fix his eyes on vacancy; and say, nothing but death was desirable: wind oppressed him in a violent degree, and he knew not what it was to sleep. In this miserable state he was half compelled to enter upon a course of Valerian tincture, he grew less averse as he became used to it. He continued it from November 1770, to June 1771; and he is well.

There

There are many parts of England, where the true kind is to be had in plenty. On the great heath called Hind-Head, in the road to Portsmouth, I have seen a vast deal of it; and Ray names it upon sufficient authority near Ashwood, by the Buxtonwell, in Derbyshire; at Parnham, between Brindale and Orford, in Suffolk; and on Ilford Common.

The principal places whence the roots are now brought are four; the neighbourhood of Cambridge, the forest of Dean in Gloucestershire, Oxford, and the near part of Kent.

The Cambridge and Kentish Valerian generally have a mixture of good and bad; for they pull up some from the heaths and high grounds, which they mix among the Water kind: what I have seen from about Oxford, has more of the Water Valerian: from the forest of Dean comes the purest, and the best we have: but this, like the rest, though the kind be better, is commonly taken up at a wrong season.

'Tis said none is imported: but I have found among it some of a kind differing in the colour from almost any of the English sorts; and also the tuberous white roots of the *nardus montana radice olivari*, which is a Valerian, not native of this kingdom: therefore

fore those parcels of the drug probably came from France, and could not but be worse for the keeping.

It does not appear that any part of the world produces this drug in greater perfection than our own country, provided the soil and situation be good wherein it grows.

That these articles, soil, and situation, can make so considerable a difference in the virtues of plants, appears from various instances in nature; and from the effects of culture. Lavender, and the other aromatic herbs, are much sweeter, and fuller of virtues, in those kingdoms where they grow wild, than with us who raise them only in gardens; and many herbs which we have wild in common with the south of France, are yet greatly superior in their qualities there.

Culture renders the common garden plants larger and more succulent; but it takes off their taste and qualities: and the difference between the Heath and Water Valerian is very like that of a wild and garden herb; the situation in the muddy bank of a ditch, giving abundant moisture and nourishment.

We see, almost without exception, that the same plant is more richly flavoured when
it

it grows in a dry soil, and more insipid when in wet: and we find the highest aromatics, in general, are natives of dry and warm lands.

Indeed, to know the effect of abundant moisture and rich earth, we need not look farther than the common lettuce. In the wild state, wherein it lives on dry parched and barren ground, its juice is acrid and bitter, and its virtue highly narcotic; so much as to have obtained it the name of poisonous: in gardens, where it has rich earth, and abundant moisture, it becomes mild, pleasant, and innocent. Nor does the form differ less. When wild, the stalk is woody, and the leaves are prickly: when cultivated, the stem is tender, and the leaves are unarmed. So the austere crab of the common, becomes the mellow apple of the orchard; and the bitter almond, sweet.

The case is the same in all these instances. The virtues or the qualities of the herb, root, or fruit, depend upon the natural and moderate quantity of juices elaborated, undisturbed in the vessels, and well concocted by the sun: this gives the taste, scent, flavour, and medicinal qualities. When nature throws its seeds in a rich wet soil; or human industry removes them to the garden; the character

rafter of the plant is altered ; the effective particles are debased, or drowned among the additional quantity of juice ; and the whole becomes in the end tasteless, scentless, inefficacious, and insipid.

On these principles the culture of the Valerian root in gardens must never be attempted ; and in its wild state, so much depends upon the nature of the soil and season of the year, that it is happy the characters of excellence and imperfection are marked so strongly on the root itself. Those who neglect to observe them, will be disappointed in their expectations from this drug, though in reality it possesses all the virtue that has been ascribed to it ; and deserves more commendation than has been given it, even by its warmest advocates.

F I N I S.

Directions for placing the PLATES.

PLATE 1, to face page 8.

PLATE 2, to face page 9.