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Contributors

Hancock, John, M.D.

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REMARKS

ON THE

SIRUBA,

OR

NATIVE OIL OF LAUREL,

ITS PRODUCTION, USES, &c.

BY

J. HANCOCK,

MEM. MED.-Bot. AND ZOOL. Soc. LONDON, PHIL. Soc. BRIT. GUIANA, HON. MEM. Soc. ARTS, EDIN., &c.

Mondon:

PRINTED BY J. WILSON, GEORGE-COURT, PICCADILLY.

1830.

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REMARKS

ON THE

SIRUBA, OR NATIVE OIL OF LAUREL.

THE tree which yields this unique ethereal fluid is found in those extended forests between the sources of the Parime, Essequebo, and Orinoco. It is one of the most magnificent trees of the Guiana forest. I have seen it, in some instances, free of branches to the height of sixty or eighty feet, and about six feet in diameter. Its wood is aromatic and bitter, compact in its texture, of a brown colour, of moderate weight and hardness, easily wrought, not subject to the depredation of worms or insects, and said to be exceedingly durable either in or out of water. At the same time, it has great strength and resistance: it is not improbable, that one day it may become an important material in the dock-yards of Great Britain, when enlightened naval architects shall no longer exclusively rely, for such resources, on the meagre forests of the north. Its roots, leaves, and branches, abound with this peculiar camphoraceous volatile fluid, which we term native oil. I have not, hitherto, been able to obtain flowering specimens of the tree, but have brought to London branches with fruit. Its flowering season must be about the end of the year, as it has several times been found in fruit in February and March.

Certain aborigines of interior Guiana, give the name of Siruba both to the tree and its liquid product: others call it Akayāri; but it must not be confounded with another large tree, known by the same name, which yields a fragrant gum-resin, and which I have noticed in a paper printed in Dr. Brewster's Journal of Science for October, 1829, on certain resins and native balsams of Guiana.

There is reason to believe this tree, the Siruba, may be identical with the Ocotea cymbarum (species dubia) of

Humboldt, and of which he obtained imperfect botanical specimens; yet that celebrated traveller has made no allusion to the rare product here considered. The Indians assert, that two kinds of this tree exist in the forests—one only affording oil; and whether these are mere varieties or distinct species is uncertain.

Every part of the tree being replete with the oil, an exuberance collects in hollow longitudinal cavities in the trunk, and that at times in very considerable quantities. Much skill and experience is required in finding the vein which contains the liquid, as the marks or indications thereof are extremely obscure. These veins are found at considerable depths in the wood, and, at times, even at the heart or centre of the tree.

The oil is procured by scoring into the tree with an axe, and, immediately that the vein is struck, applying a calabash or other vessel to receive the liquid, which, being compressed by the wood, issues in a sudden gush; and caution is hence required, lest the axe, striking into the vein with a large aperture, the precious fluid should be lost by a sudden dispersion.

The native oil, although met with, at times, in large quantities, is found, comparatively, in but few individuals. The Indians say, that a person unskilled in finding the vein, so called, may hew down hundreds of trees without obtaining a drop of oil.

In the older trees the oil is often of a fine amber tint; in the younger ones it is clear and pellucid. It appears, however, not to differ in specific gravity, (near that of spirits of wine,) or in any other circumstance, to my knowledge.

The collection or deposit of the oil goes on in the dry season; and it is said that, owing to the accumulating force of the fluid and over distension, the vein has been known to burst, disperse its ethereal contents, and perfume the forest for leagues around. Being so volatile it soon

evaporates at the common atmospheric temperature of warm climates, and requires to be well stopped; a small vial of it, which I procured in the interior, in 1816, was nearly dissipated before my return to the British Settlement. This was the first sample ever seen or heard of there. It is only its volatile nature which can account for its being so long unknown to Europeans, and even to the littoral tribes of Guiana, although I found it was known to many of the Spanish and Portuguese Creoles of the interior, and who have chiefly contributed to its collection. In fact, the difficulty of discovering its hidden reservoirs, and the want of implements amongst the native tribes for procuring and preserving it, affords, perhaps, the only reasons for its remaining so long incognito; and I cannot perceive how they could at all avail themselves of it prior to their acquiring the use of the axe. Some suppose they have hitherto purposely concealed it; but the obscurity seems rather to have been owing to the recondite mode of its production.

This tree, the Siruba, in general appearance and habitus, corresponds with the description of dryobalanops camphora, a large guttiferous tree, of the islands of Sumatra and Borneo—yielding, at times, an oily or semifluid kind of camphor, considered to be, as authors inform us, a very precious remedy in eastern countries.*

* "Eadem arbor fundit oleum camphoræ, est potius resinæ liquida quam oleum. Extra patriam non usu venit, sed excellit vi resolvente et dissipante." Murray's Apparat. Medicaminum, vol. 4, p. 453; where we find, collected from various authors, many particulars respecting this oleum camphoræ nativum, as we may call it—a substance which yet appears to be scarcely known here, excepting from written reports. In the same work, also, are many curious points relating to the tree, which I should not have noticed but for their coincidence with Siruba. "Hinc lignum ejus fabris lignariis acceptum, quibus tanto magis commendabile, quum facile elaborari possit, leve sit, durabile tamen, nec ab insectis facile consumatur. Et cistas inde conficiunt, quibus vestes a formicis aliisque insectis muniuntur." See also Colebrook in Asiat. Res. v. 12; Phil. Trans. v. 68, p. 169; Marsden's Hist. Sumatra; and Dr. Thomson's Lond. Disp.

In 1823, being tired with Indian promises, I engaged Mr. Jas. Fraser, at a heavy expense, to go with a party of the natives into the interior, expressly for the purpose of procuring this fluid, together with flowering specimens of the tree, and various other objects of natural history. Finding none of the oil collected, he returned with the promise of getting it at the proper season, and in which he succeeded in several subsequent journeys. His success soon induced others, at Demerara, to embark on the same enterprise. The market was soon overstocked; and, in the mean time, the trees were cut down and destroyed so unsparingly, that at this time, I am told, the oil is becoming very scarce, and it is probable that little will be obtained hereafter until new sources shall be opened. Fortunately there are spots in the vicinity of the Parime where the trees abound; and by using an auger in place of the axe, there is little doubt a tree may be made to yield its liquid product for many successive seasons-for centuries, indeed, for ought we know to the contrary.

Few persons, perhaps, would like to encounter the toils and expense of opening this new route, unless the assistance of government could be obtained, or else some preferent or specific privilege for the importation of the oil for a limited time.

To reach the place in question, we should ascend the Essequebo, mounting all the falls of that river, pursue the western branch to near its source, then cross over the height of land to the Tacotoo; passing down this river, we soon find the Portuguese fort of St. Joaquin, in lat. 3° north, and long. 60° 40′ west, which, as it happens, falls within the confines of the famed lake of Parime, as placed on the maps, and which is not, as some learned modern geographers suppose, entirely a fiction. A vast flood does, for a few weeks, annually occupy this part, chiefly on the north-west of the river Parime, and a most delightful

Dorado or guilded city, but, as it were, an ocean studded with palm-trees, hillocks, and small islands. I traversed this district during several months in the years 1810-11. On this problem, i. e. respecting the existence of the lake of Parime, the Baron Humboldt, though not on the spot, has deduced, from reasoning and analogy, more correct views than ordinary travellers might have furnished from actual observation. See his Personal Narrative, vol. 5. My worthy friend, Waterton, author of the "Wanderings," has likewise been over this ground.

This ethereal fluid is empirically commended by the natives in a great number of disorders, both internal and external, and that of course without regard to the rules of physic or of therapeutic indications; and, whatever may be its effects as an internal medicine, there can be no doubt that, by its endermic or outward application, its action is not merely that of a counter-irritant, but also anodyne, antispasmodic, and discutient, as appears from its effects on wounds and on topical inflammations, for, by rubbing it on the parts affected, it resolves inflammatory tumors; and there are abundant testimonials of its affording relief in gout, painful rheumatic swellings, as well as in severe sprains and bruises.

Applied to wounds, it appears to act as a balsamic and vulnerary—the most lacerated wounds, after its application, supported by adhesive plaster and bandage, being found to heal by the first intention, and, like simple incised wounds, almost without suppuration.

Spirits of turpentine and brandy were separately tried in similar cases: each of these were found to augment the pain and irritation, whilst the oil, on the contrary, assuages both.

It should be introduced to the bottom of the wound if

possible; the dislodged portions of flesh or bone being brought into place, should be kept gently supported with adhesive plaster and bandage; and the dressing need not be removed till symptoms of pain or uneasiness indicate a repetition to be necessary. I should infer, that similar benefits would be gained by its application to gun-shot wounds, or those of other missiles.

It was by mere accident I learnt the balsamic effects of this fluid when applied to wounds. A worthy physician, a friend of mine,* in Demerara, had sent to request several bottles of the native oil: whilst packing them, one of the bottles burst, in pressing it to the bottom of the hamper, and my hand, forced by my own weight on the broken glass, was lacerated severely—the blood flowed profusely for a few moments. I expected a smarting pain and severe inflammation would follow, from my hand being drenched with the oil; to my surprise, however, no such effects ensued—the bleeding stopped spontaneously: it was bound up with old linen, and the wounds healed more speedily than I ever experienced before, even in simple cuts.

In sprains and bruises, without laceration, the part may be rubbed with one part of the oil and two or three of vinegar, shaken together, then bound up with a flannel roller; repeating the application twice or three times a day, according to the degree of injury. By these means,

* It is not without reason I call him a friend—I had been totally blind for many months, although most kindly attended by very able and experienced practitioners, whose disinterested friendship I shall ever cherish in grateful remembrance.—The medical man, in the Colonies, must practise all the collateral branches of the profession.—From this hopeless state of perfect blindness, my sight was, in 1825, restored, through the exertions of Dr. Robson, the gentleman above alluded to, (with the joint aid of his worthy partner, Dr. Alleyn.) He has since returned home and settled at Harrowgate or Knaresborough, in Yorkshire. The mention of his name is the more appropriate here, from his having taken a strong interest in the present subject, and contributed towards the little knowledge we yet possess respecting its medicinal properties.

most violent sprains and bruises have been cured in a few days.

The Indians esteem it as their best remedy for cramp, and apply it by smart frictions with the hand over the part affected, covering it warm.

It is said to be a capital cosmetic, removing eruptions and giving a softness to the skin, by rubbing in a few drops once or twice a day. Although I have not tried it with this view, I am convinced the report is correct, because of its well-known power in removing scorbutic blotches, ringworm, and many other skin diseases, by rubbing it on the eruptions, and taking small doses inwardly, as five to ten drops, at bed-time.

In sore throat and inflammation of the tonsils, it is introduced on a soft feather, keeping the throat warm.

In gout and rheumatism, whether acute or chronic, it is extolled as a valuable remedy, taking ten, twenty, to forty drops, twice a day, and applying it by friction to the parts affected. One or two grains of opium may also be taken for a few nights. In these cases, it is continued till it induces a general perspiration. When the parts are swollen or inflamed, and painful to the touch, they ought not to be rubbed or disturbed, but may be smeared with the oil, or with equal parts of the oil and spermaceti ointment, wrapped in flannel, and kept as quiet as possible till the tenderness has abated. When gout attacks the stomach, the inward use of the oil is a useful remedy. Its chief use, however, in gout, is in preventing the fit or paroxysm, by removing the gouty diathesis, and for which it is best taken in a small dose each night, with the use of the Sarsa, diluent drinks, and a cooling regimen.

In pulmonic cases, attended with cough, soreness of the chest, spitting of blood, or purulent expectoration, this oil may be taken internally, and (mixed with an equal quantity

of olive oil) rubbed on the chest.* The patient should wear warm clothing and flannel next the skin, use a bland diet, especially milk and barley, and diluting drinks; but above all, in those cases, to guard the breast, or rather whole chest, with flannels; a double or treble vest of this sort will be found of vast advantage in coughs and pectoral complaints, and most necessary to promoting the effects of the native oil as a diaphoretic resolvent.

Such bronchial and pulmonary affections, or incipient consumption, attended with cough and hectic emaciation, have been cured by taking about four, six, or ten drops twice a day, with the simple decoction of Sarsaparilla and liquorice, and very small doses, as half a grain, of the grey oxide of mercury, with about one grain of opium, and two of ipecacuanha, repeated once or twice a day.

If referable to its subtle searching power I know not, but I have observed, that its vapour inhaled into the lungs will expel wind from the *stomach*,—a person troubled with flatus need only breathe the vapour from the mouth of a vial, for a few moments, and the air or gas will presently

* In this way, it appears to abate internal inflammation—its penetrating power is such, that, even by its outward application, a peculiar odour is soon communicated to the urine and other secretions. Early application and perseverance is recommended in these cases.

* For further advertences on this neglected and forlorn disease, I beg to refer the reader to some "Observations on Pulmonary Consumption, &c." published in the Lancet of the 8th May, 1830, p. 204, or the same republished in the Leicester Herald of the 9th June last; and I take this opportunity to make my acknowledgments to the (to me unknown) editor of that independent journal, for the very liberal and handsome manner in which he has been pleased to introduce my observations.

‡ This I regard as the most necessary article in these affections, and it should, if possible, be that of the Rio Negro, as vastly preferable to all other species. I have lately met with this kind, apparently, at the London Docks. On this important remedy, I beg leave to direct the reader's attention to some remarks of mine, on the Sarsa of the Rio Negro, in the Trans. of the Med. Bot. Soc. for July, 1829, and the same reviewed and extracted in the Lancet of the 3d and 24th October, in the same year.

be brought up. It will be rendered more effectual if, by a deep expiration, the air be first expelled from the lungs, closing one nostril, and inhaling the vapour till the lungs are inflated, repeating it a few times. The best way, however, of inhaling its vapour, as in catarrh, asthma, hooping cough, &c. is by adding a few drops of the oil to a little hot water in a bottle, and to respire from its mouth. If flatus of the lower bowels attend, as in windy colic, &c. a few drops of the oil may be taken, with much benefit, on a lump of sugar.

This oil, it appears, has been found a powerful emmenagogue, in doses of twenty to forty drops a day; it may, in
some cases, perhaps, be owing to its power of removing
suppressio mensium, along with its nervine and bracing
qualities, that it has acquired the reputation of being a
remedy for sterility, a condition not unfrequently depending
on a fault of the menstrual periods.

It has been employed in South America in several complaints of the urinary organs, as in *gleet* and *leucorrhæa*, and in *hæmaturia*, or bloody urine: dose and regimen as in pulmonic cases.

Its use appears to be well marked in various nervous and spasmodic affections, as tic doloreux, cephalalgia, or nervous head-ache, spasms, tetanus, or lock jaw, convulsions in children, and in syncope, or faintings; exhibited in doses of from one to five, ten, or twenty drops, and repeated according to circumstances—as the age of the patient, temperament, or urgency of the symptoms; the affected parts being also rubbed with it and covered with flannel. In these and many other affections, as croup and hooping cough, its effects will be greatly enhanced by its junction with opium,

I am told it was found last winter to be a good remedy for *chilblains*, the part being occasionally rubbed with a small portion of the oil and kept warm. It has been known to cure a deafness of long standing, which appeared to arise from paralysis of the auditory nerve, with induration of the wax of the ear; a single drop was, in this case, dropped into the ear, once or twice a day.

As it tends to give tone and increase the vital powers, its internal use has been found of greater advantage to persons of debilitated and relaxed habits. Those of robust or sanguine constitutions, should, prior to its use, prepare themselves by a cooling regimen and laxatives; and a moderate bleeding will frequently give it great effect: it will ever be right, on this point at least, to consult a skilful practitioner: and, in all cases, whilst taking the oil inwardly, to keep to a moderate, bland diet of milk and vegetables, &c. refraining from all stimuli, or heating articles of food or drink; and, as occasion may require, directing its action on the skin by the use of vapour baths, and taking warm barley water, which seems to be one of its best adjuncts.

In proof of its use in various affections herein mentioned, I could adduce numerous instances, and am ready so to do at any time required; but to give a detail of cases in all those affections in which benefit has apparently arisen from its use, would be too tedious, and surpass the limits of this paper; besides, the better informed have, at length, become more wary, and learnt that little confidence is due to cases got up, as in most quack advertisements, as a puff, or for the support of any favorite remedy, public or private.

I have mentioned the doses as employed in South America, but there is reason to believe that, in hot climates, the human body is less susceptible to the action of medicinal agents in general: if this idea be well founded, the doses should be diminished. It is best, as a general rule, to begin with a small dose, as three or four drops on

sugar, or with milk and sugar, and gradually increase it to ten, twenty, or thirty drops, according to the effect—again returning to the small dose, and augmenting it as before.

Externally, it is used in its pure state, or mixed with an equal portion of sweet oil, tallow, or any simple ointment, which tends to fix or impede its exhalation.

By the native Indians the most extravagant encomiums are bestowed on this anomalous product, for its efficacy, not only in spasmodic complaints, such as paralysis, convulsions, and cramps of the limbs, but also in the local phlegmasia, as a resolvent and topical anodyne for all painful tumors, whether cold or inflammatory; for sprains and bruises; and in rheumatism, both acute and chronic; for various cutaneous eruptions, &c. For all such complaints they direct it to be well rubbed on the affected parts, and to be taken likewise internally, especially if the patient be of a bad habit of body, in small and gradually increased doses, till it produce some sensible effect, as by sweat, urine, or otherwise.

In coughs and pulmonary affections, they also employ it as above, and quite indiscriminately, whether in recent or prolonged cases, only enjoining therewith a rigidly cooling and spare diet; and such a regimen is the more requisite in persons of an irritable, sanguine, or plethoric habit. In such cases, viz. in coughs, catarrhs, and thoracic affections, it is not only taken into the stomach, and rubbed on the chest, but its vapour is also inhaled into the lungs, along with the vapour of hot water. In the same manner it is employed in asthma.

The Indians regarding this oil as a sort of panacea, or universal medicine, it is not strange that they should, in addition to what is already mentioned, ascribe to it the virtues of an antidote for both vegetable and animal poisons; indeed, its sensible qualities seem to entitle it to a place among the warm alexipharmics. But they insist

much on its being a remedy for slow poison; for an idea prevails amongst all the inland tribes, of a certain substance called "mashie," which is capable of slowly destroying life, without producing any sensible disturbance at first, but causing, in time, a gradual emaciation, the hair falling off, with slow fever, &c. I have seen several patients who were said to be labouring under the effects of this pretended poison:—these were all well-marked cases, either of pulmonary consumption, or of nervous atrophia; and I conclude that such have been the instances of slow poison, which are said to have been cured by the native oil of laurel.

Being, in sensible qualities, warm, penetrating, and picquant, some may consider it highly stimulant, and improper even in chronic inflammations; so did I at first, but experience has convinced me of the contrary: facts oft confound our mooted theories.—I know not what might be the result of large doses in such cases; but, according to my observation, whether by outward use, or small doses taken inwardly, it actually does abate inflammatory action, especially if, by warm tisans, as barley water, &c., a perspiration be promoted. Should it prove otherwise, however, as possibly it may in this climate, I should wish to be corrected.

In true inflammations, I should not advise its use till evacuants have been premised, as also nitre and antimony, and bleeding, if required; after which, the oil appears to promote and render more permanent their effects.

Whatever may be its stimulant effects, they are modified or counterbalanced by other innate properties of a discutient nature, which tend to resolve inflammation, by an operation altogether unknown to us;—indeed, our affected knowledge of the rationale, or action of remedies in general on the animal economy, would appear absurd, if we could perceive our own vanity in such explanations: whilst ig-

norant of the principles of life—of even one link in the chain—we confound the secret and essential operations of medicinal agents with their ultimate or obvious results, and sit down content with the fullness of our wisdom, which we designate by the pompous titles of physiological and pathological science. Its more obvious effects, however, taken in small doses, as five to ten or fifteen drops, twice a day, are those of a diaphoretic, alterative, and general secerner; it seems to pervade all the emunctories of the body, as indicated by the peculiar odour of the perspirable matter and other secretions; such, at least, are its effects in hot climates; and this, perhaps, may serve, in some measure, to account for its reputed uses in certain typhoid fevers, and various disorders, either acute or chronic.

I have found it to be a very superior preservative of animal substances, for anatomical collections, and the cabinets of natural history, as reptiles, insects, fishes, &c.; and, as such, I had the pleasure, two years ago, of presenting a sample of it to a very learned and eminent naturalist attached to the British Museum. The subject for preservation may either be kept in a dry state, exposed to the vapour of the oil, which will penetrate through its pores, or in water, with an ounce or two of the oil to each gallon, in a close vessel.

This is all I shall say at present respecting the uses of the native oil, and this will, doubtless, be thought too much: it may be termed by some, perhaps, a piece of empiricism—if they can bestow this epithet on a simple product of Nature, in which no secrecy or concealment is attempted, not pertaining to the secret compositions of art. I am aware that the faculty are, at present, unfavourable to the admission of new clinical agents, unless they be the result of the most elaborate chemical operations—such as those of Quinine, Morphia, Strychnia, &c., the advantages of which, I humbly conceive, are rather imaginary than

real. I do not wish the merits of the native oil to rest on my ipse dixit, nor do I vouch for all I have said of it, which is partly derived from the testimony of others; but the liberal minded, I presume, will give it a trial before they pass sentence. It was deemed requisite, however, in absence of more exact details, to indicate the uses or properties, so enthusiastically ascribed to it by the natives, and by others who have, since its introduction, made trial of it,—that further experiments may either verify, disprove, or, perhaps, elicit other important uses, to which this little-known product may be applied. For further information on this subject, see the Edin. Jour. of Science, for July; Jour. of the Royal Inst. for the present month, p. 161; and the Lancet of the 10th and 31st July, 1830, where several other particulars are given.

The exorbitant import charges, besides the first cost, will, I regret to say, keep this article at a high price, so long as the present misguided policy shall continue to operate almost as a prohibition to the unknown native treasures derivable from British Colonial possessions in various parts of the globe. We cannot believe that the present enlightened premier will much longer remain indifferent to such gross abuses. A more liberal policy would open new resources to commerce, and render important additions to medicine, to the useful arts, and domestic economy. We know not, however, what important events may transpire, under the reign of an illustrious, wise, and patriotic monarch, and patron of the sciences, who has personally visited many of the foreign accessories of the mighty empire over which he now presides.

J. H.

London, October, 1830.

ADDENDA.

"Apparent Hydrostatic anomaly with Lawel Oil.

In reference to what is said at page 9 of this pamphlet, respecting the external treatment in gout and rheumatism, the author is fully convinced, from more recent experience in his own person as well as others, that, of all outward applications to parts afflicted with the pain and inflammation of gout, there are none so generally useful as the common bread and milk poultice with a small quantity, as eight or ten drops, of the native oil, and a little mutton suet, or hogslard simmered into it,—this laid on warm, and renewed once or twice a day, will often be found to give speedy relief in the most severe pains arising from gout and rheumatism.

At page 10, line 15, add,—in such affections, and where there is actual ulceration of the lungs, the genuine Sarsa is one of the very few remedies which are at all worthy of confidence. It is a fact, yet unheeded in Europe, that the Sarsa of Rio Negro, (and of Pericour and Uruana) does manifest a peculiar influence in healing ulcers in all parts of the body, and of removing a multitude of chronical affections. It is scarcely less remarkable for its power of improving the condition and increasing the bulk of the body,—and therefore, in reality, merits the appellation of a restorative.

No allusion having been made in the foregoing pages concerning the chemical properties of this native fluid, it may be briefly stated, that, it readily dissolves resins, camphor and elastic gum or caoutchouc; and it shews peculiar affinities for ether and alcohol. It may not be improper here to transcribe a few words from a brief but comprehensive notice on this point, which I have observed in the last number of the Royal Institution Journal, for October, 1830,—

"Apparent Hydrostatic anomaly with Laurel Oil.

"Doctor Hancock has remarked a curious apparent anomaly in the hydrostatic pressure of two fluids,—the lighter of which, upon mixture, passed to the bottom, and the heavier to the top. One of the fluids is laurel oil; the other a mixture of pure ether, (i. e. free from alcohol) and proof spirit in equal proportions, or with a slight excess of ether. Such a mixture is lighter than the essential oil, but when the latter is poured upon the former it floats, and indeed whichever is added last, the same effect takes place; nor does the ultimate state of things differ, whether the mixture be made gently, or violent agitation be given to it." (p. 161.)

there is actual viceration of the lungs, the genuine Sarsa is one of the very few remedies which are at all worthy of confidence. It is a fact, yet unheeded in Europe, that the Sarsa of Rio Negro, (and of Pericour and Uruana) does manifest a peculiar influence in healing alcers in all parts of the body, and of removing a multitude of chronical affections. It is scarcely less remarkable for its power of improving the condition and increasing the bulk of the body,—and therefore, in reality, merits the appellation of a restorative.

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