SOME OBSERVATIONS
CONCERNING
THE MEDICAL PROPERTIES
OF THE
PYROLA UMBELLATA,
AND THE
ARBUTUS UVA URSI,
OF
LINNÆUS.

By PROFESSOR SMITH BARTON,
OF PHILADELPHIA.

COMMUNICATED IN A LETTER TO

B. C. BRODIE, Esq.

Read Nov. 14, 1815.

SIR,

IN the Fifth Volume of the *Medico-Chirurgical Transactions*, there is a paper by Dr. William Somerville, on the diuretic operation of the *Pyrola Umbellata* of Linnæus, in which he states that he has not, in any of the books consulted by him, met with any intimations concerning the medical powers of this beautiful little shrub, except the solitary observation of F. Pursh. I beg to refer to my "Collections for an Essay towards a *Materia Medica* of the United States*," for an account of

* Third Edition. Philadelphia, 1810.

this plant : and I shall now add some of the further observations which I have collected on the same subject, and which I request you to lay before the Society.

There seems to be a good deal of analogy between the effects of the *pyrola umbellata*, and the *uva ursi*, as I have mentioned in the account to which I now refer ; and in one case of intermittent, under the care of Dr. John S. Mitchell ; the urine was increased in quantity, and was of a black colour. But the diuretic effects of this plant have not, I think, in general, been remarked by those who have been much in the habit of employing it in America. Yet it is probable that it is in part, at least, by virtue of its operation upon the urinary system as a diuretic, that it has been found so highly useful in one of these affections which I am presently more particularly to mention.

The black colour of the urine of a person who was under the use of the *pyrola*, is worthy of notice, especially as the late Dr. Heberden has recorded nearly a similar appearance in the urine of a patient who was using the *uva ursi*, a plant, it has already been observed, most closely allied to the American *pyrola*. The explanation of the fact, in both cases, is rendered the more difficult to me, as my own experiments, and those of several of my pupils have satisfied me, that iron never does manifest itself in the urine of those patients who have been taking

even very large doses of the preparations of this metal, and continuing their use for a long time. I know, indeed, that Mr. Lorry has made a contrary assertion. Besides, the patients using the pyrola and the uva ursi, had not been taking iron.

It has been intimated by Dr. Somerville, that the pyrola umbellata is an Indian remedy. The plant is, indeed, a principal article in the *Materia Medica* of the Indians of North America. But I am not acquainted with all the diseases in which they employ it. Two of these diseases are rheumatism and fever. In both they employ a strong warm decoction of the whole plant, and give it in such large quantities that it does not, and could hardly fail to excite copious perspiration. By this operation, and by this I presume principally, the medicine has often been found very useful in the two complaints which I have just mentioned.

Nor has the practice of using the pyrola in fevers been confined to the Indians. The white inhabitants of many parts of North America also employ it. I am assured, on good authority, that it was very extensively employed, and with excellent effect, in many cases of the typhus fever, which, under the appellation of "camp fever," prevailed among the American troops, and carried off great numbers of them, during the time of the revolutionary or first American war. A decoction of the plant was used, and I believe that it was chiefly of service, by ex-

citing perspiration very largely. At present we hear but little of the use of the pyrola in such cases of fever; it having given way to the employment of the eupatorium perfoliatum of Linnæus, which is perhaps more entitled to attention. I have made more particular mention of this eupatorium in my *Collections*, Part First, pages 28, 55; and in Part Second, pages 22—26.

All my trials and inquiries respecting the pyrola umbellata have convinced me, that it is an important antilithic: not less so than the uva ursi, which, with me, is no mean commendation. For I have, certainly, in my frequent trials of the latter, in cases of nephritis, and especially nephritis calculosa and arthritica, very generally found it eminently useful. It has even seemed (however different may be the explanation of the fact) to favour the expulsion of granules of calculi, an effect which Dr. Hencher, a long time ago, ascribed to various vegetable astringents.

Dr. Somerville, whose paper is chiefly occupied with an account of the diuretic properties of the pyrola umbellata and its good effects in dropsies, informs us, that the Hurons and other Indian nations “use it in gravelly complaints very commonly.” This simple intimation is nearly sufficient to convince me, that the whites, or European Americans, derived their first knowledge of the antilithic powers of this plant from the Indians. In truth,

notwithstanding all that has been said, by declaimers of a certain description, and by superficial observers, concerning the paucity of the diseases of the American Indians, and of their peculiar exemption from the most grievous maladies, which so often embitter the days of the civilized man, the Indian, or man of America, is by no means exempted from calculous affections. This, indeed, is so far from being the case, that we have already derived from the savages of North and of South America, several of our real or reputed antilithics, such as, not again to mention the *pyrola umbellata*, the *cissampelos pareira*, and the *xylosteum tataricum*. I hope, at no distant period, to communicate to your very respectable Society, the free result of my inquiries concerning the diseases and remedies of the Indians of North America.

If future and more extensive trials shall completely confirm the observations of Dr. Somerville, concerning the highly diuretic powers of the *pyrola umbellata*, there can be no doubt of the propriety of introducing this vegetable into general practice, and of our bestowing upon it a respectable position in the catalogue of remedies for dropsies. Its tonic power which is mentioned by Dr. Somerville, and for which there is just foundation, may possibly give the American plant some advantages over other diuretics that are in common use, and which possess, in our usual mode of managing them, nothing, or but little of the robust quality ; as for ex-

ample, digitalis and squill. For it must be obvious to every practitioner in the least conversant with the nature and treatment of different forms of dropsies, that it is often a matter of the first importance to employ, in the intervals between the use of the debilitating diuretics, the *remedia roborantia*, such as some of the purer bitters, quassia, columbo, &c. and even small doses of opium; and what will often, perhaps, be of more importance, the invigorating and happy influence, in such cases, of a sea voyage. The necessity of using even powerful roborants, is especially indicated in the management of those dropsies, whether anasarca, hydrothorax, or ascites, which return periodically, as in the tertiana hydropica, which I have more than once had occasion to see in the United States; and for which the bark, with crystals of tartar, will sometimes be found the best remedy. It is not necessary to pursue this subject to a greater length; though my inclination would lead me to speak of the happy effects of blood-letting, of mild cathartics, and of a vegetable diet, in many cases of dropsy which have fallen under my immediate notice.

Returning more immediately to the *pyrola umbellata*: I agree with Mr. Pursh, that this plant is not a legitimate species of the genus of *pyrola*, and accordingly, a long time ago, I bestowed upon it another generic appellation, associating along with it the *pyrola maculata* of Linnæus, another American plant, which is sometimes called “rats-bane”

in the United States, on the supposition (certainly unfounded) that this plant is a powerful poison. I have elsewhere mentioned the uses to which the North-American Indians apply the *pyrola rotundifolia*. See *Transactions of the American Philosophical Society*. Vol. III.

The *pyrola umbellata* is one of the plants (not few in number) which are common to the old and new worlds. Whether in the north of Europe, or in the south of Asia, (in both of which it is indigenous,) it is applied to any medical purposes, I know not. Gmelin, in his *Flora Siberica*, says nothing of its medical qualities.

I am, Dear Sir,

With much respect, and with true esteem,

Your friend, &c.

BENJAMIN SMITH BARTON.

London, August 24, 1815.

TO B. C. BRODIE, ESQ.