

To the general reader it may appear remarkable, that the chemistry of a vegetable production, in such extensive use as the hop, should still be so imperfect—our knowledge of its nature and composition so unsatisfactory. But the well-read chemist, who knows how wide the field of chemical research is, and how rapidly our knowledge of it, as a whole, is progressing, will feel no surprise. He may wish to see all such obscurities and difficulties cleared away, but he will feel inclined rather to thank and praise the many ardent and devoted men, now labouring in this department, for what they are doing, than to blame them for being obliged to leave a part of the extensive field for the present uncultivated.

Among largely used narcotics, therefore, especially in England, the hop is to be placed. It differs, however, from all others we have mentioned, in being rarely employed alone, except medicinally. It is added to infusions like that of malt, to impart flavour, taste, and narcotic virtues. Used in this way, it is unquestionably one of the sources of pleasing excitement and healthy tonic action, which well-hopped beer is known to produce upon those who drink it. Other common vegetable productions will give the bitter flavour to malt liquor. Horehound, wormwood, and gentian, and quassia, and strichnia, and the grains of paradise, and chicory, and various other plants, have been used to replace or supplant the hop. But none are known to approach it in imparting those peculiar qualities which have given the bitter beer of the present day so well merited a reputation.

Among our working classes, it is true, in the porters and humbler beers, they consume and prefer, the *Cocculus indicus* finds a degree of favour which has caused it, to a considerable degree, to take the place of the hop. This singular berry possesses an intoxicating property, and not only replaces the hop by its bitterness, but to a certain extent also supplies the deficiency of malt. To weak extracts of malt it gives a richness and *fullness in the mouth*, which usually imply the presence of much malt, with a bitterness which enables the brewer to withhold one-third of his hops, and a colour which aids him in the darkening of his porter. The middle-classes in England prefer the thin wine-like bitter beer. The skilled labourers in the manufacturing districts prefer what is rich, full, and substantial in the mouth. With a view to their taste, it is too often drugged with the *Cocculus indicus* by disreputable brewers; and much of the very beastly intoxication which the consumption of malt liquor in England produces, is probably due to this pernicious admixture. So powerful is the effect of this berry on the apparent richness of beer, that a single pound produces an equal effect with a bag of malt. The temptation to use it, therefore, is very strong. The quantity imported in 1850 was 2359 cwt., equal to a hundred and twelve times as many bags of malt; and although we cannot strictly class it among the narcotics we voluntarily indulge in, it may certainly be described as one in which thousands of the humbler classes are compelled to indulge.

It is interesting to observe how men carry with them their early tastes to whatever new climate or region they go. The love of beer and hops has been planted by Englishmen in America. It has accompanied them to their new empires in Australia, New Zealand and the Cape. In the hot East their home taste remains unquenched, and the pale ale of England follows them to remotest India. Who can tell to what extent the use of the hop may become naturalised, through their means, in these far-off regions? Who can predict that, inoculated into its milder influence, the devotees of opium and the intoxicating hemp may not hereafter be induced to abandon their hereditary drugs, and to substitute the foreign hop in their place? Even such a

change in one article of consumption, how great a change in the character of the people might we not anticipate?

This leads us to remark, that we cannot as yet very well explain in what way and to what extent the use of prevailing narcotics is connected, as cause or effect, with peculiarities in national character. But there can no longer be any doubt that the soothers and excitors we indulge in, in some measure as the luxuries of life, though sought for at first merely to gratify a natural craving, do afterwards gradually but sensibly modify the individual character. And where the use is general and extended, the influence of course affects in time the whole people. It is a problem of interest to the legislator, not less than to the physiologist and psychologist, to ascertain how far and in what direction such a reaction can go—how much of the actual tastes, habits, and character of existing nations has been created by the prolonged consumption of the fashionable and prevailing forms of narcotics in use among them respectively, and how far tastes and habits have been modified by the changes in these forms which have been introduced and adopted within historic times. The reader will readily perceive that this inquiry has in it a valid importance, quite distinct from that which attaches itself to the supposed influence of the different varieties of intoxicating fermented drinks in use in different countries. The latter, as we have said, all contain the same intoxicating principle, and so far, therefore, exercise a common influence upon all who consume them. But the narcotics now in use owe their effects to substances which in each, so far as is known, are chemically different from those which are contained in every one of the others. They must exercise, therefore, each a different physiological effect upon the system, and if their influence, as we suppose, extends so far, must each in a special way modify also the constitution, the habits, and the character.

Our space does not permit us, in the present number, to speak of the use of opium and hemp; we shall return to these extensively consumed drugs on a future occasion.

Notes of a Short Tour from Montreal to Portland and the White Mountains.

Although we perceive by a paragraph in the *International Journal*, that the *White Mountain Tour* is over, water having, on the night of the 15th ultimo, frozen an inch thick at the Glen House, at the foot of Mount Washington, we have much pleasure in laying before our readers the following Notes of a visit to that quarter by a Member of the Institute, in the hope of its being instrumental in inducing many a Canadian tourist to direct his steps to the same interesting region next season.

Having a short time ago paid a hasty visit, per rail, to the finely situated and beautiful city of Portland, and had the gratification of snuffing the exhilarating sea-breeze at Cape Elizabeth, and having also, on my way back, made a detour from Gorham to the lofty summit of the noted Mount Washington, the monarch of the New Hampshire mountains, I would fain recommend to a few of your readers to follow my example, while the season is favourable, as sure to lead to much enjoyment; so accept, if you please, the following rambling memorandum of my tour.

For particulars respecting the different places passed *en route* to Portland, it would be as well to refer to one of the Guide Books.* But lest our tourist should not be provided with so

* The Portland, White Mountain, and Montreal Railroad Guide, published at Portland, and to be had at Mr. Armour's, in Great St. James Street, is recommended, as having been of considerable use to ourselves, in noting down distances, and directing our attention to many interesting objects and facts.