

has set a limit to the conquering power of man's intellect, He has left it for man himself to discover where that limit lies; left it to be discovered by the gifted and laborious, aided by "the long results of time," not to be predicted by the timid and indolent. It is not piety, but self-satisfied ignorance and cowardice, which makes a man shrink from pressing on into the dim unknown, and decri, as presumptuous and irreverent, those whose heaven-often impulse it is to do so.

These remarks might seem uncalled for at the present day, when science confessedly occupies so honourable a position. But there still lingers in the minds of the religious a tendency to view with distrust and suspicion its bolder flights. Why should this be? How can harm come of the faithful and earnest study of God's works, seeing that He has implanted both the faculty and aspiration to gain understanding of them? Perhaps there is even a touch of what has, with just severity, been called "that worst kind of infidelity, the fear lest the truth be bad," in this shrinking from a face-to-face encounter with some of the facts of nature, and the inevitable deductions from them. Conflicting opinions upon the wisest there may be, conflicting truths there cannot. If, therefore, science bring to light facts which seem to militate against that which we hold as high and sacred truth, we may rest calmly assured that a fuller knowledge of such facts, a deeper insight into their true bearings, will dispel the appearance of antagonism. But then we must go boldly on to reach this higher stage, not turn back and basely seek the dark shelter of ignorance. Or rather, the man of science goes boldly on for us. How ungenerous to reproach him for his boldness!

It cannot be denied that there is also in our highest literature a tone, not of open hostility, but of covert contempt for science. It is looked down upon as tending to materialism; and its devotees as men whose eyes, long scrutinizingly fixed upon the outward aspects of things, grow dim to all beyond; and who, in Wordsworth's memorably unjust words, "would peep and botanize upon their mother's grave." Does, then, a too curious searching into nature's works strip them of their beauty, their mystery? Does it tend to debase the heart and dull the imagination? Impossible. The beauty, the mystery, are not of such flimsy, shallow kind, as to vanish beneath an earnest questioning gaze. What it was worth God's while to make, it is surely worth man's while to understand. As to the charge of materialism, of course the business of physical science is with the material world. But if it have one decided tendency at the present day, it is to exalt and spiritualize our idea of matter, and, far from destroying, to enhance the sense of mystery. Why should literature treat science as men treat one another—each expecting in his neighbour all his own virtues added to all theirs, with the faults of both left out? Why, because it does not comprise all man seeks for of truth and knowledge, should he slight what it does? Rather should we honour the humblest labourer in the fields of science, and prize the fruits of his labour. What man is so rich in intellectual possessions that he can afford to despise the smallest fragment of truth? Nature has not denied legs to those creatures whom she has endowed with wings; neither

can the soaring imagination wisely leave unvisited the solid ground of fact, whereon science is so notably extending her possessions. Like the birds, she must come down to feed if she would be strong on the wing.

Miscellaneous.

Albert Coal, or Albertite.

A beautifully lustrous, and intensely black substance is exhibited, under the name of Albert Coal, in the New Brunswick Court. It occurs at Hillsborough, Albert County, N. B. Albertite presents the general appearance of an excellent cannel-coal, and breaks with an extremely brilliant, conchoidal, vitreous fracture. Its jet black powder when heated in an open vessel, partially melts, and then gives off continuously a large volume of combustible vapour, leaving a light and bulky coke. This vapour burns with an intensely smoky flame. But there is one point to be noted here of considerable interest: the coke which Albert coal leaves is nearly pure carbon, there being in fact, speaking practically, no ash in Albertite, as the following result proves:—

1.55 grammes left .001 of ash.

This is equal to no more than .0645 per cent., which we believe that no cannel-coal or anthracite hitherto analysed contains so little as 1.0 per cent. of ash. Among its volatile constituents, Albertite contains scarcely determinable traces of nitrogen and sulphur.

Accompanying the Albert coal, there may also be found in the New Brunswick Court some very pure and pale-looking specimens of oil produced by its destructive distillation. As might be expected from the almost entire freedom of the mineral from nitrogen and sulphur, these oils are almost without offensive odour, and are, moreover, admirably adapted for burning in paraffin lamps. They are not capable of forming an explosive or inflammable vapour, and the light they give is brilliantly white.

A sample of oil submitted to fractional distillation did not commence to boil until the thermometer had risen to 170° C., while only half the oil had come over at 270° C., one-seventh or even more, remaining in the retort when it had been raised to the boiling point of mercury. This residue did not show any traces of crystals when cold.

It is to be regretted that the discovery of an abundant supply of native mineral oil has caused the manufacture of Albertite oil to be discontinued.

Specific Gravity of Oils.

Oils of different specific gravities are obtained from petroleum according to the temperature to which it is subjected during distillation. That which passes over at a temperature of 302° Fah., according to the experiments of Professor B. Silliman, junior, has a specific gravity of .733 (three lower than sulphuric ether); that which has been obtained at 320° has a specific gravity of .752; that at 338° Fah., .766; at 392°, .800; at 518° .854. Pure alcohol has a specific gravity of .815. As several eupion oils obtained from petroleum are lighter than alcohol, we can thus form a very correct idea of their volatile character.