knows the various causes in operation at the time to mitigate such voyages, causes mainly political and commercial. Other influences were however at work, not the least of which was “the total transformation which astronomy and geography had undergone” during the preceding century. The romantic narratives here given—those of Hawkins’s and Frobisher’s three voyages, Drake’s voyages of 1577 and 1585, Gilbert’s voyage of 1583, Amadas and Barlow’s voyage, 1584; Cavendish’s first and last voyages, and Raleigh’s voyage to Guiana. Prefixed to each narrative is a short historical introduction.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and useful facts.]

Black Sheep

The following extract of a letter from Mr. Sanders of Chilsham, who permits me to publish it, seems worth placing on record in this section. I mention it in the hope that any one in the bush, or black sheep in the Australian flocks, as long as animals thus coloured were of use to man, although they were never, as far as Mr. Sanders knows, repeatedly bred from, and certainly not to his owncase. On the other hand, so soon as coloured sheep ceased to be of use they were no longer allowed to grow up, and their numbers rapidly decreased. I have elsewhere assigned reasons for the belief that the occasional appearance of dark-coloured sheep in the flocks is due to the mixture of the internal colouring of the species. This tendency to reappearance appears to be most difficult to eradicate, and quickly to gain in strength if there is no selection. Mr. Sanders writes:—“In the bush sheep flocks were vast and in such flocks there were a large number of black sheep. In the bush, the coloured sheep were of no use and were killed. As a result of this we have the present number of black sheep, and the dark sheep occur in the bush.”

Edmund J. Mills

Smokeless London

As I hope soon to have an opportunity of reading a paper on the subject, I am copying one from the Saturday Review:—“The question of saving a valuable space by replying to your correspondents of last week in detail. I may say however that the scheme has been carried out in practice at a gas-work to which I shall afterwards refer. When it was found that the apparatus for making gas on an extension of six hours was insufficient for supplying the wants of the long winter evenings the distillation was stopped when gas had been removed to the extent of 9000 cubic feet per ton. The larger quantities obtained from the coal per unit of time and the superior illuminating power obtained on account of the higher grade over the difficulty and rendered the existing plant sufficient. In no practical obstructs were discovered in discharging the retorts, I do not think the difference between the extraction of 4000 and 3333 cubic feet per ton would make a material change in this respect. Mr. Matthew Williams points out a much more serious obstruction in the pietiehior indifference of the gas companies. In reply to E. R. P. I. may say that the fuel resulting from a uniform extraction of 3333 cubic feet per ton is practically smokeless if it is taken hot from the retorts and immediately quenched with water.”

Westminster, December 27

W. D. Scott-Moncrieff

Colliery Explosions and Coal-Dust

ACCEP'TING Mr. Galloway’s view that in many mines the extent and destructiveness of colliery explosions are due to the distribution of coal-dust in the air, may I suggest the possibility of preventing the explosion from spreading beyond the sphere of the flame by sprinkling a fine spray through the air at regular intervals with mineral oil. A shady road, with one such sprinkling may be kept free from dust for several weeks during the summer, and the corridors of a mine, not being open to wind and rain, would of course remain wet for a longer time. A source filled with dust and treated with mineral oil will retain the oil for months even when exposed to sun and rain. The mixture of coal dust and oil is quite inflammable. The experiment may perhaps be worth trying in one of the collieries. December 27

R. Russell

Geological Climates

P. R. DEUCON is under the impression that the claim of Araucaria Cunninghamii to have flourished at Bournemouth during the Eocene, rests on the fact that this plant is “squashed.” The foliage is however abundant there, occurring almost wherever vegetable remains are found, from the east of Bournemouth Pier to half a mile beyond Boscombe. In one place, where a Bluff is literally full of it, the disarticulated branches are perfect, and not in the least degree compressed. Again, the determination was not made by Prof. Haughton, but rests upon my statement, that this plant is abundant and that of A. Cunninghamii is not. The name of one from the other. That it is Araucaria foliage I am perfectly satisfied, but whether the existing Australian species is identical and unmodified, rests durable until other