

LETTERS TO THE EDITOR

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[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 novel facts.]

Photograph of the Nebula in Orion

DURING the night of September 30 I succeeded in photographing the bright part of the nebula in Orion in the vicinity of the trapezium. The photographs show the mottled appearance of this region distinctly. I intend shortly to publish a detailed description of the negatives. They were taken by the aid of a triple objective of eleven inches aperture made by Alvan Clark and Sons, and corrected especially for the photographic rays. The equatorial stand and driving-clock I constructed myself. The exposure was fifty minutes.

HENRY DRAPER

New York, October 2

An Annelidan Entozoon

WHILE examining the intestinal tract of *Megaderma frons* from the Gold Coast, I found coiled up spirally and adhering to the wall of the lower part of the ileum a small parasite about half an inch in length. On placing this under the microscope I was much surprised to find that it belonged to a class of worms (*Annelida*), none of the species of which have hitherto been known as Entozoa, and further that I was unable to refer it to any of the orders of that class.

On showing it to Dr. J. D. Macdonald, F.R.S., he quite agreed with my opinion that it represents a new order of Annelids, and is moreover disposed to consider it as a connecting-link, hitherto wanting, between the *Chatopoda* and the true leeches.

The specimen in question is about half an inch in length without distinct segmentation, except what is indicated by the perfectly regular disposition of the cephalo-somatic appendages—seventy-three pairs, extending from the anterior almost to the posterior extremity of the body—whereof those occupying the anterior attenuated fourth of the body are fin-like lamellae, apparently branchial, with a single unarmed mouth not provided with a proboscis, with the intestine spirally coiled round the ovarian tube and terminating inferiorly at the posterior extremity of the body.

Megaderma frons, the host of this remarkable annelid, is a species of bat of very peculiar aspect, which is apparently widely distributed throughout and restricted to the tropical parts of the Ethiopian region. It belongs to a genus whereof one of the species at least is known to suck the blood of smaller bats, which it captures on the wing (see my "Monograph of the Asiatic Chiroptera," p. 77), and as all the species closely resemble one another in structure, it is exceedingly probable that they have all much the same habits.

Although I found remains of insects in the intestinal canal of the specimen from which the above-noticed parasite was taken, yet there was also mixed up with them a large quantity of hair, not from its own body, but evidently (judging from its microscopic structure) that of some other bat on which very likely it had been feeding. It is also worthy of notice that the intestine of the parasite is filled with a reddish matter like the remains of blood.

I have handed over this very interesting specimen to Dr. Macdonald, who will shortly publish a full description of it with figures.

G. E. DOBSON

Royal Victoria Hospital, Netley, October 7

Sounds made by Ants

FROM the very interesting remarks lately made by Sir John Lubbock regarding the habits and capabilities of ants, I gather that he seems to consider them as a silent group. The modes of producing sounds among insects are as various as beautiful, whether by internal or external agency. As a rule the larger animals produce sound by internal means, *i.e.* voice, and insects by some external means.

Among ants I know of two varieties or distinct kinds, a black and brown, that make a concerted noise loud enough to be heard

by a human being at twenty or thirty feet distance, and which sound is produced by each ant scraping the horny apex of the abdomen three times in rapid succession on the dry crisp leaves of which the nest is usually composed.

The noise made by a single ant is sufficiently loud to be heard on a very dry leaf if attention is directed to it, and no doubt by this means of a vibrating medium they can without special auditory organs communicate with each other. I had the honour of first discovering that the great *Mygale stridulans* made a noise; the apparatus by which it was produced was discovered and fully described by Mr. J. Wood Mason of the Indian Museum, and I should be glad if I am the means of making a similar discovery regarding ants. White ants (so-called) make a noise which is audible—if put on crisp paper—by suddenly shaking the whole body, and seem to warn each other by this means.

Sapakati, Sibsagar, Asam, August 20

S. E. PEAL

Faraday Exhibiting Ghosts

MR. J. INNES ROGERS' communication on a "Spectre of the Brocken at home" reminds me of a passage in Dr. Bence Jones's "Memoir of Faraday," vol. i. p. 422.

Faraday's niece, Miss Reid, thus writes: "One evening a thick white mist rose and completely hid everything before us. About ten o'clock my uncle called me into his room to see a spectre. He placed the candle behind us as we stood at the window, and there, opposite to us, appeared two gigantic shadowy beings, who imitated every movement that we made."

Ardchapel, N.B., October 16

W. S.

Ice under Pressure

IN reply to C. A. M.'s letter of last week I would make the following remarks:—Ice is not an exceptional substance, for mercuric chloride has also given experimentally the same results, and though I have not yet had the opportunity of submitting other substances to the same conditions, yet I conclude from other experiments that all the bodies which I have so far investigated, and which are of the most varied description, will also exhibit the same phenomenon. As I have not yet published my detailed results, I do not wish at present to enter more fully into the subject, but I may say that the influence of pressure in the present case is not of the same kind as that referred to by C. A. M. as occurring in the text-book named, for the following amongst other reasons. From Prof. Thomson's prediction and Sir Wm. Thomson's experiments it resulted that the melting-point of ice is lowered by pressure, and lowered in proportion to the pressure, whereas in my experiments, at any rate so far as I have at present seen, we do not vary the melting-point by diminishing the pressure, but we prevent the substance from melting at all. If the pressure be increased even but slightly above the critical pressure, the ice melts at its ordinary melting-point. The influence of pressure in this case is not one of degree varying with the amount by which the pressure is reduced. The two cases are, I consider, entirely different, and are not contradictions. Similar remarks would probably apply to paraffin and spermaceti, though these are bodies which have not come within the range of my experiments.

Firth College, Sheffield, October 6

THOS. CARNELLEY

A Peat Bed in the Drift at Oldham

IN NATURE, vol. xxii. p. 460, there is a letter by Mr. Jas. Nield, giving an interesting description of unique, or nearly unique, appearances in the boulder clay near Oldham. It appears that this glacial deposit has one or more beds of peat, or fragments of peat, intercalated along with it at various depths, leading to the inference that the clay had been stirred up and the fragments of peat had in some manner been mixed with it. That peat bogs, or surface black peaty mould, had existed at no great distance is a conclusion forced upon us, and that the action of ice and snow, probably during a submergence, had mashed up the clay and distributed the peat amongst it. The boulder clay, and the scratched mountain sides, and the travelled fragments of rock, do not extend over the whole of England. It used to be said by geologists that the effects of a severe Arctic climate could not be detected south of a line drawn across the country from London to Bristol; by which it was inferred that all the land north of that line had been under water, subject to the influences of snow