

LETTER TO THE EDITOR.

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A Mite whose Eggs survive the Boiling Point.

IN several preparations of boiled flax seeds for fungus-culture it was observed that numbers of mites (*Tyroglyphus histiostoma*) made their appearance. A petri dish containing mites was boiled, and in about three weeks there were again large numbers of them present, though the cover had never been removed since boiling.

On June 6 a decoction of flax seeds containing mites in a test tube was boiled for five minutes, and the neck plugged with cotton wool. On June 15 a similar preparation was made, but the test tube was covered with an indiarubber cap in addition to the plug of cotton wool. On August 24 both test tubes contained living mites. So the inference seems justified that the eggs, though saturated with water, must have survived the boiling point.

The mite is about 2/5mm. in length. The bean-shaped eggs ($108.5\mu \times 66.5\mu$) are enclosed in two transparent valves like watch glasses.

I am much indebted to Mr. G. H. Carpenter for identifying the species.

J. ADAMS.

Royal College of Science, Dublin, September 2.

THE BERLIN CONFERENCE ON WIRELESS TELEGRAPHY.

WE have on two or three occasions referred in these columns to the International Conference on Wireless Telegraphy which was held last month at Berlin. The conclusions at which the conference arrived have now been published in the *Cologne Gazette*, and were summarised in the *Times* last week. In considering these conclusions it is as well to bear in mind that the conference was only preliminary; though representatives of nearly all the important States were present, it was not intended that the recommendations should be final, but rather that they should serve as a basis for discussion at a future conference with more definite powers. Still, the decisions are of interest as they indicate more or less clearly the general state of opinion on the present position of wireless telegraphy.

We have frequently pointed out in NATURE that for the present at any rate it should be the aim of those directly interested in the development of wireless telegraphy to perfect it as far as possible as a means of communication between ships at sea and between ship and shore. This is really an infinitely more important object than the more ambitious and more striking attainment of Transatlantic communication, and such seems to have been the opinion of the conference. Within the last few days it has been announced that Mr. Marconi is now practically in a position to reopen Transatlantic communication on a commercial basis, but even if the attempt proves successful on this occasion less will have been gained than seems to be the case at first sight. We have already means of communicating telegraphically across the Atlantic, and though wireless telegraphy may add another, and possibly a cheaper, method, the gain will be trifling compared with the advantage of perfecting it in a direction in which we have no other resources, whereas should the working of the high power long-distance stations in any way interfere with or hinder the development of the less pre-

tentious short-distance signalling, the loss to the community generally will be very great. Unfortunately, the actual condition of affairs at the present time is difficult to determine; important facts are kept quiet for what are doubtless sound commercial reasons, and assertions and counter assertions are rife. On the one hand we are assured that the big stations do not interfere with the small ones, and on the other we have undeniable evidence that these monstrous etheric disturbances may affect all apparatus in their neighbourhood. It may be possible to avoid this interference by suitable adjustment, but it ought not to be permissible to make this necessary any more than it should be permissible for a factory to belch forth smoke from its chimneys on the ground that those who wish for cleanliness and health can move their firesides to the country.

Wireless telegraphy, indeed, presents a somewhat peculiar and difficult problem; in the first place its medium of communication is one to which all people have an equal right, and which, therefore, one person or set of persons must not be allowed to use to the detriment of others; secondly, its utility depends directly on its availability under all conditions, and at all places, so that to be most useful there must be either a world monopoly or else a perfectly free interchange between competing systems. The second consideration is a strong argument in favour of State monopoly of any means of communication, whilst the first is an additional reason for international control of wireless communication. At the same time it is naturally unjust that those who have spent time and money and energy in pioneering development should be deprived of the legitimate reward of their labours. It is obvious that a solution to the difficulties is only to be found by a fair compromise between conflicting interests, that of the public at large on the one hand and those of the various wireless telegraphy companies on the other. The resolutions of the Berlin conference indicate the only way we can see in which such a compromise can be arranged. Two of these, which are concerned with rates and the method of charging, are not of particular importance; the others propose that coast stations shall be obliged to receive and forward all telegrams from vessels at sea by whatever system transmitted, that telegrams referring to wrecks or calling for assistance shall have precedence, that stations shall be arranged to give the minimum of interference, and that any necessary technical details of the working of apparatus shall be published. The first of these is naturally the most important, and at the same time is the one which it will be most difficult to ratify. It is, of course, well known that the Marconi Company has refused to acquiesce in such an arrangement, by which, as far the largest and most powerful wireless telegraphy company, they have least to gain and most to lose; their position as undeniably the pioneers of practical wireless telegraphy entitles them to special consideration. For this reason the delegates of Italy and Great Britain did not sign this recommendation. The Italian Government is bound by a fourteen years' agreement with the Marconi Co., so that all the delegates could do was to undertake to suggest to the company the amendment of the agreement in the desired direction. The British Government is in an almost equally difficult position, for the Marconi Co. is a British company, and holds already a practical monopoly in this country. Still, it is to be hoped that these difficulties will not stand in the way of an ultimate settlement. There is not unnaturally a suspicion that so far as other countries are concerned there is a desire to benefit, if possible, by

the organisation which the Marconi Co. has built up, and to enable home-bred systems to reap some of the reward of the enterprise of others. To a certain extent this is unavoidable, but it should be possible to arrange matters so that little or no injustice is done to the Marconi Co. whilst securing to the public the very fullest benefit that wireless telegraphy can confer, and it must not be forgotten that the interests of the British public, especially where shipping is concerned, extend all over the world.

MAURICE SOLOMON.

THE SOUTHPORT MEETING OF THE BRITISH ASSOCIATION.

THE seventy-third meeting of the British Association was opened yesterday, when the President, Sir Norman Lockyer, K.C.B., F.R.S., delivered his address in the Opera House.

Everything points to a highly successful meeting, though the number attending will probably fall short of that of the previous Southport meeting twenty years ago. In other respects, however, this year's meeting will probably surpass in interest that of 1883. The second edition of the local programme shows some additional arrangements made since our last article.

The list of excursions is given in greater detail, and a dredging excursion has been added on Thursday, September 17. A good deal of interest is being manifested in the motor car excursion on Saturday afternoon to Hoole and Rufford. A number of Southport gentlemen have placed their cars at the disposal of the local committee, and the show of automobiles will in itself attract attention. The excursion has a further interest, as Hoole is being visited, so that an opportunity may be given of seeing the place where Jeremiah Horrocks, the astronomer, lived at the time of his observation of the transit of Venus. A proposal has recently been mooted in Liverpool and Southport to erect a memorial to Horrocks, and a good deal of attention has been given to the Lancashire astronomer in the local Press. The Liverpool Corporation has kindly lent Mr. Eyre Crowe's picture of Horrocks at Hoole to the Southport committee, and it will be exhibited in one of the reception rooms during the meeting. The accuracy of Mr. Crowe's delineation of Horrocks's astronomical apparatus having been disputed, a Southport gentleman who has made a special study of Horrocks and his works has had painted by a local artist a picture representing the same subject depicted by Mr. Eyre Crowe, and the two pictures will hang in the same room.

The dredging excursion arranged for Thursday, September 17, is being organised by Prof. Herdman, and has been made possible through the courtesy of Mr. R. Dawson, the superintendent of the Lancashire and Western Sea Fisheries, who has kindly put the Sea Fisheries steamer, *John Fell*, at the disposal of the local committee for that purpose.

It is yet uncertain whether the kite-flying experiments for investigating the upper atmosphere can be successfully carried out at Southport. As mentioned in our issue of August 13, the Admiralty vessel put at the disposal of the kite-flying committee is no longer available, and it has been found impossible to bring the *Renown* (the boat from which the experiments are being conducted by Mr. W. H. Dines at Crinan) to Southport. The local committee has been offered the use of the *John Fell* by the Lanca-

shire and Western Sea Fisheries Board for three days (Monday, Tuesday, and Wednesday, September 14, 15, and 16), but it is feared that the deck space will be insufficient for the proper conducting of the experiments. It is, therefore, possible that Mr. Dines will merely exhibit the apparatus at Southport, though every endeavour will be made to make use of the boat.

Prof. Pernter, of Vienna, has had forwarded to Southport one of the cannons used on the Continent for firing on clouds so as to arrest hailstorms. Test experiments in horizontal firing of vortex rings will be carried out on the Southport shore by permission of the Corporation.

A lecture has been arranged for Wednesday night, September 16, on "Garden Cities," by Mr. Ebenezer Howard, the founder of the Garden Cities Association, following an excursion on the same day to Port Sunlight, Cheshire, the model village erected by Messrs. Lever Brothers.

The local loan exhibition which is situated in the corridor near the reception room is in the hands of a small committee drawn from the Southport Literary and Philosophical Society, Society of Natural Science, and Photographic Society, and comprises local botanical and geological exhibits, photographs and drawings illustrating the antiquities of the district, and various exhibits of general scientific interest. The canoe which was dug out of the bed of Martin Mere in 1899 is being exhibited during the time of the meeting in the lecture room of Section H (Anthropology) in the Town Hall. The canoe is seventeen feet long and four feet wide.

The reception and writing rooms in the Art Gallery are rendered specially attractive by the presence on the walls of a portion of the Southport Corporation permanent collection of pictures.

The Mayor of Southport (Mr. T. T. L. Scarisbrick) is extending an almost lavish hospitality at his residence, Greaves Hall, Banks, and the local committee and the Southport Corporation are doing their utmost to make the meeting a memorable one so far as social entertainment is concerned. The Mayor has invited members of the Association to attend Emmanuel Church on Sunday morning, when the preacher will be the Bishop of Ripon. Other special preachers in Southport the same day include the Bishop of Liverpool, the Dean of Peterborough, the Rev. J. D. Bevan, the Rev. A. L. Cortie, S.J., the Rev. T. J. Walshe, the Rev. J. H. Moulton and the Rev. Frank Ballard (Wesleyan), the Rev. Dr. John Hunter (Congregational), the Rev. Dr. S. R. Macphail, Moderator of the Presbyterian Church of England, and the Rev. R. A. Armstrong (Unitarian).

In connection with the Mayor's and the committee's receptions to-night and on Tuesday next, a portion of the municipal gardens in front of the Cambridge Hall will be enclosed. These gardens are illuminated by electricity at night, more than 4000 glow-lamps being installed among the foliage of the trees. The installation is quite unique in this country. Special fittings had to be designed, as, being an outdoor installation, the electrical conditions are very severe. More than sixteen miles of underground and overhead cable are used.

The Mayor's dinner at Greaves Hall on Wednesday, September 16, promises to be a very brilliant function, and the lecture by Prof. Forsyth before the Literary and Philosophical Society on the following night on "Universities" will be largely attended by members of the British Association, a large number of whom have accepted the invitation to be present.