

LETTERS TO THE EDITOR.

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Effects of the Gale of February 26.

THIS district, and so far as I know a large part of Ireland, was in the early hours of the morning of February 26 swept over by a gale of exceptional violence. The maximum occurred between 1h and 2h. 30m. a.m.

The destruction of trees has far exceeded that caused by any gale within my memory. Nothing at all like it has occurred here since the celebrated storm of 1839. The damage, I should say, certainly exceeds the total during the intervening interval of sixty-three years. No kind of tree has escaped.

What has struck me most is the strong evidence of the fact that it is not the absolute pressure of the wind which does the damage, but the unsteadiness of the pressure, giving rise to oscillating motion which, when the periodicity of the gusts happens to be nearly the same as that of the tree, causes it to succumb.

Owing to the immense number of the prostrate trees on the present occasion, there are exceptional opportunities for testing this. In numerous cases plantations have been practically levelled, but of the few survivors the greater number are usually found on the outside, principally on the weather side.

Single trees standing alone in fields have usually escaped. Of groups of three or four it is rarely the case that that on the weather side has been the one to suffer. I rather think that where the row lay in the direction of the wind there have been more casualties than where it was at right angles to it, but I have not been able to satisfy myself as to this. There are, however, many cases of trees lying nearly parallel to the fence.

The trees in nearly every case lie in a north-east direction. A very few are in various degrees of orientation. The gale seems to have been most unequal in its action. Lanes some forty yards wide, which can be traced for several hundred yards, have been swept down, and on each side, perhaps for 200 yards, little or no indication of the tempest is perceptible. There seems to be no evidence of any rotation of the blast in these lanes.

I think that it is clearly proved that in the case of trees, and probably more or less of artificial structures, unsteadiness of blast is very largely responsible for damage, and that recorded velocity and mean pressure form very fallacious guides as to force to be resisted.

It has been remarked to me by several people that trees in exposed situations, even upon the tops of hills, have escaped, while others have been swept away wholesale in hollows where they were entirely shielded from the direct action of the blast.

Birr Castle, March 14.

Rosse.

Ambidexterity.

In the "Notes" of NATURE of March 12 you mention an association proposing to teach writing with both hands by the method of upright penmanship. This is quite intelligible, but when it is said that the child by this means will acquire left-handed skill in all other manipulations, this cannot be correct. Left-handedness means that the left hand can be used equally well with the right; this is true, but not in the same way. The course of the cricket ball in a left-handed bowler is not the usual one. When a surgeon is left-handed it is not to enable him to do with his left exactly the same thing as with the right, but something different. After making an incision in the eye with his right hand, he takes the knife in his left to complete what he requires, without altering his position or turning the patient round. A left-handed waiter, after removing the limbs of the chicken on one side, changes the knife and fork to the other hands, and does the same on the other side. It only wants a moment's consideration to see that if the arms are turned round one goes in the right direction and the

other in the left, so that if the right hand is used in turning a screw to the right, as screws are all made, a corresponding movement with the left would turn it in the opposite direction. As left-handed screws are not usually made, a left-handed man has to use a different and inferior set of muscles, and works with a disadvantage. In the same way ordinary handwriting cannot be copied by the corresponding muscular and nerve apparatus on the left side; it is done by a totally different apparatus after much time and trouble. It is much easier to use the corresponding set of muscles, but then this produces backward or mirror writing. The only movements common to the two sides must be near the median line. If the corresponding muscular and nerve apparatus be used in both arms, the result is equally good, but it is not the same, as in writing or turning a screw. If one hand imitates the exact movements of the other, it is done by another apparatus and at a disadvantage, as with a child learning the scale and using different fingers for similar notes. There is, therefore, no such thing as ambidexterity, unless, indeed, it is used in another sense, as in the violin player, where he educates each hand for its own particular object.

SAMUEL WILKS.

Mendel's Principles of Heredity in Mice.

THE experiments respecting heredity in mice conducted by Mr. Darbishire in the Oxford Laboratory at Prof. Weldon's suggestion, and described in *Biometrika*, ii., parts i. and ii., are of exceptional interest. As the fruitful development of these and similar experiments depends on a true interpretation of the facts so far reached, I offer a few words in supplement to the conclusions deduced by the author.

By crossing Japanese waltzing mice having pale fawn and white coats and pink eyes with ordinary white pink-eyed mice, 154 offspring were produced, of which 137 were grey and white, 1 was grey, 7 were yellow and whitish, 9 black and white or whitish. The colour-patches showed decided variations in amount and in tint. A fact of extraordinary physiological significance (omitted from the preliminary account) is that though the eyes of both parent-forms were pink, the cross-breeds *without exception had dark eyes*, a result which, though to some extent paralleled by certain plant cases, is probably as yet unique among animals, at least in degree.

The cross-breeds bred *inter se* gave 66 mice, of which 13 were pink-eyed albinos, 17 were pink-eyed with more or less colour in the coat, and 36 were dark-eyed, some (presumably all) having colour in their coats. Bred with albinos the cross-breeds gave 111 pink-eyed albinos, and 94 with dark eyes and some colour in their coats. The coat-colour phenomena, though exceedingly important, are too complex for consideration in a few lines. The evidence also, as yet, is in some respects insufficient, but did space permit I should be glad to discuss these facts as far as they go. As to eye-colour, the phenomena are simpler, and from them the following conclusion is drawn by the author:—

"The inheritance of eye-colour is not in accordance with Mendel's results. For since pink eyes occur in parti-coloured mice, the possession of pink eyes must, on Mendel's view, depend on a separate embryonic element from that which determines coat-colour. Pink eyes are, however, not 'dominant,' since the two pink-eyed parents of the first generation always produce dark-eyed young. For the same reason pink eyes are not 'recessive.' Yet although pink eyes disappear in the first generation (the result of crossing two pink-eyed parents) they reappear in the second; but a correlation is then established between coat-colour and eye-colour which is strong in the offspring of hybrids paired together, and at present perfect in the offspring of hybrids and albinos. The behaviour of eye-colour is thus in every respect discordant with Mendel's results."

The purpose of the allusion to "dominance" escapes me. In what circumstances could pink-eye be dominant, or recessive, to pink-eye? The reference to correlation is no less perplexing. The meaning might be clearer if we were told what offspring the writer would have expected if the inheritance had been "in accordance with Mendel's results." But a negative conclusion, however acceptable, supplies