

30 April 1932.

Professor E.B. Poulton, F.R.S.
Wykeham House,
OXFORD.

Dear Professor Poulton:

I heard from Vease the other day asking me to fix a date for my lecture, but fortunately I told him that I could fit in with almost any date, and would prefer to suit the probable convenience of the audience. He thinks 5 o'clock is the best time. If you will let him know what days will suit you best he will doubtless choose one of them and let me know. It is most kind of you to think of coming.

I enclose on separate sheets brief statements of the two experiments which your evolution fund has assisted.

Yours sincerely,

P.S. With the snails the first year only enabled me to secure some reliable, but still immature, material. If your fund can rise to it I should certainly like you to continue the grant as it enables

me to give a girl a small wage for weekly feeding and attention, and without this the whole experiment would probably come to grief. If, however, you would prefer it I could see what the Government Grants Committee would do, though they already put up £50 a year for the poultry.

R.A.F.

POULTRY EXPERIMENT.

The Grant of £50 to the experiment with Gallus was expended entirely on equipment, pens and houses. It has been possible to include several more reputed dominants than was originally intended. From the cross with Silky, 1929, we have Crest, Rose Comb, Polydactyly, Feathered Feet and Black Skin. In the second back-cross, 1931, broods were obtained for all of these, but feathered feet has become almost recessive, showing only in young chicks and is in danger of becoming lost. If possible chicks showing this character reared in 1932 will be interbred so as to complete this part of the experiment in advance of the rest. A sixth dominant Barred had also reached the second back-cross in 1931. Two other dominants, Black Plumage and Dominant White from Leghorns are a year later.

Most of the genes show great variability in the early stages of replacing domesticated by wild germ-plasm, and some, such as dominant white, are very strikingly different from their original appearance. Although this shows certainly that the heterozygotes have been modified by human selection, it would be premature, before the corresponding homozygotes can be made up for comparison, to claim that the relationship of dominance has ^{itself} ~~also~~ been affected.

EXPERIMENT WITH THE POLYMORPHIC SNAILS HELIX HORTENSIS
AND HELIX MEMORABILIS.

Several dominant variant forms of these snails are known which are closely or absolutely linked in inheritance. In these respects they resemble the polymorphic grouse-locusts Paratettix and Apotettix, studied by Mabours, and in which the homozygotes are found to be less viable in culture than the heterozygotes, thus confirming the inference from the theory that the polymorphism is maintained by a balance of selective actions, and that Mendelian dominance is a by-product of selective modification.

The aim of the experiment with Helix is to discover, by rearing large broods from appropriate matings, whether here also the homozygous dominants are less viable than the heterozygotes.