

December 3, 1942

Dear Hather,

Thanks for sending me your article for Nature, with which, of course, I find myself very much in agreement.

With respect to my own work, it might be worth while referring to the paper of 1927 On some objections to mimicry theory: statistical and genetic. ^{from the} Trans. Ent. Soc. 75: 269-278, where the notion of a gene acting as a switch was first developed, very closely corresponding with your conclusion at the foot of p.11. I should not like people to come to think that my interest in the modifiability of gene action was confined to, or dated from, the 1928 paper on Dominance. It would be truer to say that in 1928 it first occurred to me that even in respect of dominance the effect of a factor was conditioned by other factors.

Waddington does not use the phrase, but would it not be clearer if he had spoken of the canalisation of the phenotype rather than of the genotype? I imagine that the important effect is always that in certain regions within the range of phenotypic expression, the phenotype is very much more sensitive to genic substitutions than it is in other phenotypically definable regions. These last regions we can speak of as buffered, or stable, while the first are unstable and

appear as pathological compromises between two possible consistent policies.

It will be interesting to see how terminology develops to cope with this sort of idea.

I hope Ford gave you the typescript yesterday. I expect you will give a general exposition of polysomic segregations involving both pairing and ring formation. I want you also to lay hands on the evidence for the statement that there are 30 somatic chromosomes, with any contrary statement ^{or} evidence which you may think worth mentioning, such as East's that there are 24, and any information you can give as to the confidence that can be rested now on the cytological work so far done. I say this because Darlington speaks of Lythrum as ^{perfectly} particularly manageable, if not easy,, and I have not yet heard from any one else who would put it outside the range from difficult to quite unmanageable.

You may have noticed ~~that~~ what I said about Down house. I believe it is Howarth who actually lives there, with Keith as a near neighbour. Very probably Howarth would say that during the War he wants all the ^{for growing food} garden. Still, I think we might approach him about it while the paper is awaiting publication. I should have much better hope of getting Keith's cooperation, and think I shall write to him at the same time. How many hours a week a year would be thrown on to a gardener by a fairly big plot, about 7' x 40', growing 500 Lythrum annually? i.e., raising seedlings, setting out, weeding and winter digging, supposing that my Department ^{or} yours undertook enumerations and the collecting and preparation of seed?

Yours sincerely,