

DEPARTMENT OF  
ZOOLOGY AND COMPARATIVE ANATOMY,  
UNIVERSITY MUSEUM, OXFORD.

Thursday.

[17 July 1961] JHB

My dear Fisher,

Here are some dominula results. I went on Tuesday to Cothill, though the weather was far from favourable. However, fair numbers of the insect were flying. I managed to catch 50, marked and released them. Unfortunately 2 escaped, so that these can be used for the proportion of varieties but only 48 were painted. The following day (yesterday) the weather was still bad. However, the insects were sitting about and easily disturbed, while very fair numbers were flying. I think therefore that those marked 24 hours previously had had a good opportunity to get thoroughly mixed up with the population. This is further suggested by the distribution within the colony of the four marked specimens which were recaptured. Of these, one was ~~seen~~ near the edge of the colony, almost as far from the releasing point as possible; two were at a good distance from the releasing point, and one was near it. Naturally I release them at a roughly central point.

I am sending the results in tabular form on a separate sheet, and I hope they will be clear. I have added the previous results so that you have these for comparison.

You will see that the proportion of heterozygotes is considerably less than in the last two years. Including specimens bred so far, and the captures at Cothill on the 15th. and 16th., there are 165 dominula, 18 medionigra, 0 bimacula. Total = 183.

over

Giving only 9.8% of heterozygotes. However, I have had some indication that the varieties emerge a little later than the typical form, so it is rather likely that the final result may give a higher proportion of heterozygotes than this. Even so, it may well be that when all data come to hand, the varieties will be significantly rarer this year.

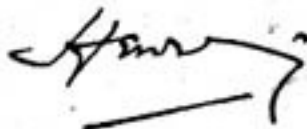
I hope to go to the colony again on Saturday and Sunday, and at least twice next week. You will see from the data that of 48 marked specimens released on the 15th., 4 were recaptured among a total of 61 the following day. As this works out at 732, I suppose we may say that we get a rough idea that the total number in the colony at that time might reasonably lie between 500 and 1000. Though of course that will be a rough suggestion only.

I expect a few more to hatch from my larvae. To be on the safe side, I brought back 4 medionigra yesterday, two rather + and two rather -, to provide eggs if further matings fail. I have at present two + and one - mating from bred material.

All well, I will write again early next week.

With best wishes to Ruth,

Ever yours,

A handwritten signature in cursive script, appearing to be 'H. M. S.', with a horizontal line underneath.

(The normal homozygote is dominula, the heterozygote is medionigra, and the rare homozygote is bimacula).

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Previous results.

	<u>dominula</u>	<u>medionigra</u>	<u>bimacula</u>	Total	gene-frequency %
up to 1928	164	4 (2.4%)	-	168	1.2
year 1939	184	37 (16.6%)	2	223	9.8
" 1940	<del>184</del> 92	24 (20.5%)	1	117	11.1

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1941 results so far.

	<u>dominula</u>		<u>medionigra</u>		<u>bimacula</u>	Total
bred 1941	68		8		-	76
caught 15.vii.	<u>dominula</u>		<u>medionigra</u>		<u>bimacula</u>	Total
	o	m	o	m		o m
	47	45	3	3	-	50 48
caught 16.vii	<u>dominula</u>		<u>medionigra</u>		<u>bimacula</u>	Total
	o	r	o	r		o r
	50	4	7	-	-	57 4 61

on this date 4  
medionigra were  
brought to Oxford,  
all the rest were  
marked & released.

o = total of unmarked specimens caught.

m = number marked and released.

r = recaptures on the 16th of specimens marked on the 15th.