

21st May 1954.

Sir Ronald Fisher, F.R.S.,
44 Storey's Way,
Cambridge.

My dear Ron,

It seems to me that the region near Sparkford, where
homostyle Brimroses are established, needs to be illuminated
by comparative counts from ~~various~~ parts of the country. You *John*
will remember that some years ago I got fairly big numbers
from Bagley Wood, Berkshire as a standard from an ordinary
English region against which the strange Somerset condition
could be compared. That large count (you have the numbers)
gave a completely sharp segregation into thrums and pins in
approximate equality, with no homostyles.

I have now been looking into the situation somewhat further
with results that are not without interest. It seemed to me
that East Suffolk is as sharply distinct as can be from any other
region in England, with its semi-continental climate, and here
follow some counts in the Ipswich district taken in April.

	T	P		Total
Elmsset	192	206	=	398
Hintonham, Great Wood	95,	105	=	200
Brimlin Wood	94	106	=	200
Bentley Long Wood	91	109	=	200
Bentley Wood (Edge)	91	109	=	200
Rayden Wood	42	58	=	100
Ashbocking	67	57	=	124
Barking Wood	251	272	=	503
Freshingfield (W. Suffolk)	147	153	=	300
	1050	1175	=	2225

The points to notice in these samples are that there is not
a single homostyle, and that the distinction between thrums and
pins was always perfectly clear, the anthers being high above the
stems or the reverse.

You will observe that there is ^{consistent} ~~a~~ excess of pins. This is

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significant for the whole sample, for which $\chi^2_{(6)} = 7.0$. The samples look, to me, perfectly consistent. I propose to obtain their heterogeneity χ^2 today or tomorrow. I have not yet had a chance to do this and wanted to get the information off to you, but you will notice that there is an excess of pins in every sample, except that of Ashbocking, and, with a fluctuation round the fairly small excess of pins, one excess of thrums is probably not unexpected when the excess of pins is real. Certainly the look of the data ~~does~~ not suggest heterogeneity to me.

It gives me the impression there is something odd here. Darwin himself points out the lower seed production of pin compared with thrum, and everywhere, as far as I know, pins and thrums are normally equal; at any rate, one would not have expected an excess of pins, I fancy. This may be contrasted with another set of counts I got this spring from various parts of Somerset, but far outside the Sparkford area where homostyles have established themselves.

	H	T	P	Total
Quantocks	4	131	134	= 269
Lilstock	0	61	41	= 102
Ivythorn	0	99	127	= 226
High Hem	1	154	144	= 299
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	5	445	446	= 896
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You will notice how strikingly this contrasts with the Suffolk counts. First, that homostyles are present, but at a low frequency. None the less I judge this to be a polymorphism. It must surely be far above what could be maintained by mutation counterbalanced by adverse selection. Secondly, you will notice the perfect equality of thrums and pins, with excesses of one or the other in the different counts counterbalancing each other. This is the normal situation, I judge, and perfectly different from the Suffolk one which is so consistently tending to fall in the direction of pins.

There is another point here. As soon as I began counting, the very look of the normal pin and thrum flowers suggested to me that I should find some homostyles, for instead of the height of the two sexual parts being very different, I encountered many flowers in which anthers and stigmas, though clearly at different levels, were fairly close: a situation one finds, as we both know

well, in the Sparkford area; though not in normal counts elsewhere, where homostyles are absent.

It looks, therefore, as if in Somerset the population is adjusted to the homostyle gene, and is holding that gene at a low polymorphism from which it can spread where necessary and has, in fact, done so near Sparkford.

I now turn my attention to the extreme western tip of Cornwall, Pendeen, a few miles from Land's End. Here I had very little time owing to pressure of other work, but, to my great surprise, I immediately began to suspect that I had met a new area where homostyles were established, because once again I found a population in which anthers and stigma, though at quite distinct levels, were much nearer together than they normally are, suggesting an adjustment to the homostyle gene. This was confirmed during the count by the discovery of a few homostyles.

	H	T	P	Total
Pendeen, W. Cornwall	6	98	96	= 200

This clearly suggests that a survey of West Cornwall might be very fruitful, and that one might find regions in which the low polymorphism of homostyles, here indicated, had moved, as at Sparkford, to give a high frequency of homostyles.

It thinks me that a survey of Primrose populations, widely conducted throughout Britain, might be well worth attempting.

Yours always,



I had been so much hoping to invite you to stay with me during your forthcoming, now near-ripe, visit to Oxford. I have, however, had

The difficulty of my housekeeper ill, which always
raises problems for a bachelor, and I am
afraid she is not yet well enough for a visitor.
I am so sorry.

Yours,
A.