

April 30th 1943.

My dear Ron,

You would no doubt receive from me a letter giving you the result of a count of 500 primroses in Bagley Wood, Berkshire (near Oxford).

Two days ago I had unexpectedly to pay a visit to the Sanatorium on the Quantocks. Taking a walk there, I had rather an odd experience which may interest you. As it was only about 30 miles from Sparkford, I had a look at 50 primroses. There were no *Lanostyles*. However, the point is this: -

The Sanatorium is in a remote place and the hills behind are far from houses and villages. The tops are heather moors mainly, but the sides and part of the tops are covered with vast Forestry Commission woods of the usual dreary conifers. Naturally therefore they are unsuitable for primroses. One finds patches of the plants in clearings, or along the side of the hidden paths. Such patches are far from each other and isolated.

The flowers in all the isolated colonies that I saw were normal except in one. This was

cut off in a narrow clearing beside a track and surrounded by pine trees thickly planted. It was approximately 225 yards long and varied from 20 to 100 yards wide. The primrose plants were very common, and I estimate that 10% of them had pink flowers. The colors varied from pale pink to deep brick-red: They were very beautiful and of course extremely distinct. I only saw a single plant in which was a slight flush of pink so that one was in doubt how to score it. My time was very short; but I measured out an ^{area} where the plants were common, and counted 83 definitely separate plants within it. Of these 73 were yellow and 10 pink. Pinks were not always quite as common ^{as this}.

Now the interesting thing is that what must be a ~~definitely~~ distinct gene (as I suppose) had also spread in this colony. For here were found plants with cream to white flowers. They were not of course as ~~distinct~~ ^{outstanding} as the ~~one~~ ^{pink} but did look very curious, especially in the odd way that the light shone through them. The whites here, as I say, variable, and a few were a little

difficult to separate from the yellows, but most were clearly distinct. They were less common than the ^{pink}~~white~~ ~~ones~~: I estimate 2 to 3%.

"Whites" and ^{pink}~~white~~ are presumably distinct genetically. The "whites" must surely be an alteration in anthoxanthin pigment. The pinks must be due to the addition of an anthocyanin. It sounds unlikely that the same gene should have such distinct chemical effects in different plants. Yet how curious that two mutant genes had spread in this colony. It may have undergone some fluctuation in numbers recently or have been spreading rapidly or something. I saw no single white or pink flower among primroses anywhere else in the woods. I had a friend with me who was much struck by the light, saying how very extraordinary these large numbers of white pink primroses looked.

Ever yours,

Henry