(Natural History) and the South London Botanical Institute (to the authorities of which I am very grateful) have shown that this variety contains no anthocyanin anywhere in the plant under normal conditions. My measurements show that the specimens are not hybrid segregates with white petals, although they have occurred in widely separated localities where natural hybridization has been present. It is possible that this process has been a stimulus to mutation.

A cross has been made by pollinating this form with pollen from normal *L. dioica*, which gave equal numbers of plants with anthocyanin in both vegetative portions and petals and plants containing no anthocyanin whatever. This may be explained by the assumption that inhibition of anthocyanin production is due to the action of a dominant gene, and that the white-petalled parent was heterozygous in this respect (as would be expected in a plant from Nature). The inhibition causes the production of white petals, even though the plant may carry the gene which produces petal colour, in the absence of the dominant modifying gene. The inhibition is not quite complete, for the partially unfolded petals have a faint salmon-pink colour, which reappears as the petals fade. When fully open the petals have a tantalizing "near-pinkness". The petals of *L. alba* often develop colour on fading, but this is blotchy and bluish.

The growth of a plant of the var. *albiflora* in artificially water-logged soil in full insolation has shown that anthocyanin is produced in the stem, but in very much less quantity than in normal *L. dioica* under similar conditions. Modification of inhibition is probably the cause of the pink petals developed by Harrison's[6] white-petalled variety after infestation with *Contarinia steinii*.

The presence of an analogous form in *L. alba* might be expected, and it is believed that it has been found in a group of four individuals found among many thousands of specimens growing in a field going fallow at Varndean, Brighton. That four individuals should occur so close together in a position where it is unlikely that more than two generations were present makes it probable that the inhibiting action is again due to a dominant gene. Flowers of this variety of *L. alba* do not show any blotches of colour when they fade.

The inhibition of anthocyanin production does not inhibit the production of anthoxanthin, the varieties described giving anthoxanthin reactions in approximately the same strength as *L. dioica* and *L. alba* respectively.

Lychnis coronaria normally possesses anthocyanin in both stem and petals, but a recessive white-petalled variety exists in cultivation which has anthocyanin in the stem in comparable quantity. This case is analogous with that of *L. alba*.

Further extensive pollinations have been performed, and with the results from these it is proposed to deal with the matter in detail elsewhere.

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June 20.

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A Suggestion respecting the Bacteriostatic Metabolic Products of Moulds

IN view of the variability of many fungi and the possibility that moulds and bacteria may be mutually biologically antagonistic when growing in the same medium, it is perhaps not too fanciful to suppose that repeated culture of a mould and pathogenic bacteria together may develop increased production of bacteriostatic metabolic products of the former. Various forms of the assumed antagonism can be imagined, and competition for a common growth-factor is probably the simplest. Furthermore, provided such antagonism exists, it is easy to see that in still or viscous media the mycelial nuclei that contained cells producing the bacteriostatic substance would have the greater survival value.

I have no present opportunity to test this idea myself, but think it would be worth while to try to produce bacteriostatic substances against selected pathogens by repeated mixed cultures, using a variety of moulds for the purpose.

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Sex Ratio Affected by Host Plant

THE cacao thrips *Selenothrips rubrocinctus* (Giard) is an important pest of cacao (*Theobroma cacao*) in the West Indies, West Africa and Brazil, and also attacks a number of other tropical plants, including mango, avocado, guava and cashew. It is a parthenogenetic species, although males occur rarely in the field. The males are very active and frequent copulation occurs, the sexes remaining *in copula* for from one to three minutes.

Urich[1] in Trinidad was th
tions on the male. Reyne[2] in Surinam found that the generation produced by mated females differed in no way from the normal parthenogenetic generation. Mating is apparently unsuccessful, and I have similarly been unable to obtain a sexual generation. I agree with Reyne's suggestion that the occurrence of males is apparently no longer of any importance to the species and is probably only a remnant of the former method of sexual reproduction. Reyne (*loc. cit.*) made counts in Surinam of 77 males and 29,100 females on cacao, the sex ratio being 1 male : 378 females and the percentage of males 0·26.

Large numbers of cacao thrips are required for experimental work in Trinidad, and they can be more readily obtained from cashew (*Anacardium occidentale*) than from cacao. The species of thrips occurring on cashew is undoubtedly the same as that found on cacao, but larger populations are as a rule encountered on the former host plant.

It was frequently observed in the field that male cacao thrips were more numerous on cashew than on cacao. Counts made in Trinidad in 1941 and 1942 gave the following results: on cacao 14 males and 9,728 females, the sex ratio being 1 male : 695 females and the percentage of males 0·14; on cashew 80 males and 3,440 females, the sex ratio being 1 male :