

My view is that the microfilariae are being rapidly destroyed by an allergic inflammatory reaction which produces the dermatosis.

In my experience diethyl carbamazine is ineffective in such a condition. On the other hand suramin appears to be of considerable value (Hutton, *Transactions*, 48, 522) and is capable of curing the condition by itself. I would further add that these filarial dermatoses are in a minority in an onchocercal area.

If Dr. Fawdry would examine the apparently normal skins of the associates of these cases, I believe he is more likely to find microfilariae.

I look forward to hearing more about the disease in this area.

I am etc.,

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10th July, 1957.

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#### POSSIBLE REPLACEMENT OF MALARIA MOSQUITOES

SIR,—The purpose of this letter is to draw the attention of research workers in control of mosquito colonies to the possible value of investigating the factors governing the infection of mosquitoes with parasites of human malaria.

If a strain of a vector species could be isolated that has inability to become infective as a dominant characteristic, the way would be opened up to implant such mosquitoes in areas where the normal vectors of the same species have been reduced in numbers. There is the hope that they would breed and become locally predominant.

There is then the possibility that, when the vector species returned, the general level of infectivity of the vector species would become greatly reduced.

Other factors could usefully be bred into such strains as dominant characteristics, if found possible to do so. These would be : an active preference for animal blood, some special markings for easy recognition in the field, and high survival values ; but the first and vital thing is to discover if it is possible to create a colony of vector mosquitoes resistant to infection.

Isolation of such characteristics does not seem technically too difficult. It would require that "presumed infective" mosquitoes that have fed on a parasite carrier should be tubed separately and dissected after they had laid their eggs. Further selection would be from the progeny of the uninfected, and so on.

Clay Huff, working with *Culex pipiens*, and bird malaria, found that inability to become infective was a hereditary characteristic. He suggested that this might explain why a vector species that transmits infection efficiently in one country is a secondary vector or does not appear to transmit infection in another country.

A very important place where such techniques might be tried out is in Africa as *A. gambiae* colonies are already in existence, and this is a vector over such a vast area. However, some Asian vectors can also be bred in captivity and it is hoped that an attempt will be made on these lines as widely and with as many species as possible.

Such biological engineering need not, of course, be confined to malaria alone. However, this is a most important field and appearance of vectors resistant to residual insecticides lends urgency to the matter. If a reduction in the general level of infectivity of vector species could be carried out on the lines indicated, the task of malariologists would be made very much easier.

I am, etc.,  
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10th August, 1957.

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