

OPERATIONAL AND SCIENTIFIC NOTES

PUBLIC HEALTH LABORATORY SERVICE, Malaria Reference Laboratory, Horton Hospital, Epsom, Surrey, Director: Sir Gordon Covell, C.I.E., M.D.; Asst. Director: P. G. Shute, M.B.E., F.R.E.S.

17th November, 1958

(To) the Editor, *Mosquito News*

Dear Sir,

I am interested in the question raised by Mr. J. D. Mabbett on page 259 of your September issue. I wonder if it has any comparison with a war time problem I had to deal with in London. As I think you know, the official opinion was that the London Underground Railways should not be used as air raid shelters because of the risk of epidemics. However, when the "blitz" started in earnest in 1940, Londoners did seek these shelters and very soon it was realized that they would have to be made available both by day and by night. Within a few weeks numerous complaints were made by people being badly bitten by insects. On investigation I was most surprised to find that mosquitoes gorged with blood were numerous at various stations of the system. After many days of searching for the breeding grounds without success, I happened to say to one of the engineering staff "There must be some stagnant (still) water about somewhere." Casually he remarked "Well there is some in the 'inverts' below the station platforms." These inverts are entered through a manhole at each end of the platform, the cables are there and the seepings from condensation cause a few inches of water

to collect at the bottom of the "inverts." This water was swarming with mosquito larvae and for the remainder of the war I had five men continuously at work, three by day and two by night, treating these many miles of inverts with larvicides.

For what it is worth, here is my explanation. The species of mosquito involved (*Culex molestus*), being autogenous, had many years previously got into the underground and had been able to maintain themselves without being observed and without being a pest. Then, when thousands of people slept in make-shift beds on the platforms, blood meals were provided for the mosquitoes with the result that their numbers greatly increased. Conditions were so bad at one stage that it seemed possible that the dwellers would be driven out. Indeed had not active measures been taken I believe this may well have happened.

It was a unique sight to see, day after day, dozens of people queuing at a first aid station one hundred yards below ground level to have their mosquito bites attended to.

Here we had a beautiful example of an autogenous species of mosquito managing to exist for many years without recourse to blood meals. Then, quite suddenly, man invades the insects domain and as the result of unlimited blood meals it increases its numbers enormously.

May it not be that the so-called *Culex fatigans* in the septic tanks is autogenous? If so, it may offer an explanation to Mr. Mabbett's problem.

Yours sincerely,
P. G. SHUTE

UTAH MOSQUITO ABATEMENT ASSOCIATION

Sixty per cent of the people in the state of Utah are now living within the boundaries of organized mosquito abatement districts.

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