BREEDING OF *CHRYSOMYIA MEGACEPHALA* IN CLOSED SEPTIC TANKS

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WHILE exploring the possibility of culex production in septic tanks, an interesting observation has been made of the ability of *Chrysomyia megacephala* to breed continuously in the fermenting fæcal material, in a closed space.

The septic tanks in question (figure 1) are masonry structures with a cubic capacity of 2.5 cubic feet to 3.0 cubic feet per user. They are divided by 2 masonry walls into 3 compartments. In compartments (*a*) and (*b*), the fermentation takes place. A solid scum of 6 inches to 9 inches depth forms on the surface under which the anaerobic digestion takes place under ideal conditions. It is here in these two compartments that chrysomyia breeds.

In compartment (*c*), most of the fæcal material has liquefied. No scum forms on the surface. Here *Culex fatigans* breeds.

The digestion is completed in the filter gallery which consists of 3 compartments again, divided by means of 2 earth partitions. The whole structure is non-masonry, being just a large excavated pit in the ground with a capacity of 10.0 cubic feet per user. This is filled up with brickbats and works more or less on the principle of the soakage-pit.

The first step in the investigation was to fix a mosquito-trap on the top end of the soil pipe including the cowl (figure 2), because the vents (slots) in the cowl were the only inlets and outlets through which the culex could go in and out of the septic tanks. This was tied at dusk to eliminate the possibility of collecting day-resting mosquitoes. A large number of *Culex fatigans* and *Chrysomyia megacephala* were caught in the trap. These could only have come from the inside of the septic tanks. The trap was kept tied for 5 days and every morning fresh specimens were collected. The next step was to open the manholes and make dips for the culex in compartment (*c*) and search for the larval stages of *Chrysomyia megacephala* in the scum, in compartments (*a*) and (*b*), where alone the larvæ could have pupated. A pure culture of *Culex fatigans* was obtained and muscoid puparia, presumably those of *Chrysomyia megacephala*, were found in the dry scum.

As a control measure, the cowl was removed (figure 3), the top end of the soil pipe covered with mosquito-proof muslin cloth and the cowl replaced (figure 4). Culex production stopped in a week, but the breeding of chrysomyia continued even after the access to the tank from the outside was eliminated, adults still being found for 18 weeks in the septic tanks after sealing.

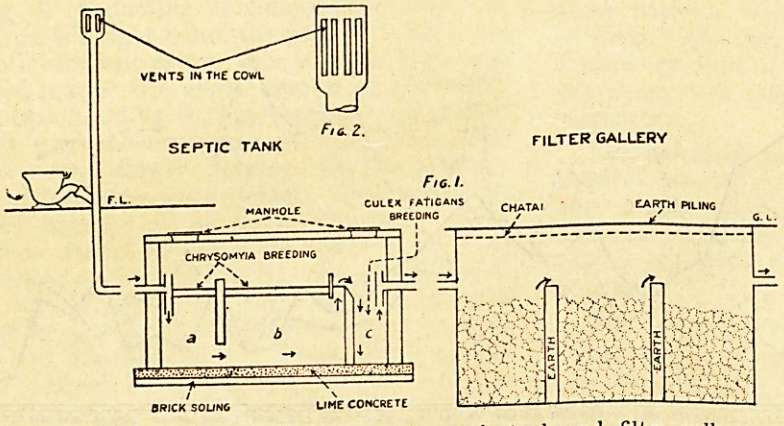

Fig. 1.—Water closet, soil pipe, sewer, septic tank and filter gallery.
Fig. 2.—Cowl with 12 slots (or vents)—each 9 inches by ¼ inch.

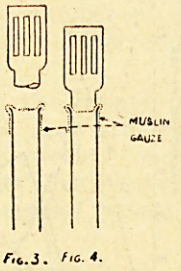

Fig. 3.—Cowl separated and top end of soil pipe covered with muslin cloth.
Fig. 4.—Cowl replaced.

The latter finding, *viz*, the continued breeding of chrysomyia in such a situation appears quite a new observation.

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A Mirror of Hospital Practice

A CASE OF BENIGN NEUTROPENIA TREATED BY SODIUM PENTNUCLEOTIDE

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THE patient, J. D., a soldier, aged 26, was admitted into hospital on 13th September, 1941, suffering from acute follicular tonsillitis of three days' duration. Five weeks previously he had undergone sub-mucous resection of the nasal septum, from which operation he had made a good recovery. He was flushed and restless with a temperature of 101.5°F. The tonsils were grossly enlarged and showed a marked follicular septic exudate associated with cervical adenitis. A throat