

A MOSQUITO LIGHT TRAP FOR USE ON CESSPITS

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Various methods for investigations into the habits of mosquitos or for their control are based on their phototropism.

In Israel, about thirty-six years ago experiments were carried out by us and the following observations made:

1. In barns we sealed all cracks and covered with sacks all entrances and windows except the lower part of the doorway. Here we placed a glass box having an open back which faced the room. All the inside surfaces of the other sides of the box were smeared with castor-oil. At the furthest corner of the room, a smoke was generated. The mosquitoes escaped from the smoke into the single light source, namely, the glass box and stuck to the walls.

2. Our observations show that at dusk, which in Israel lasts about twenty minutes only, the mosquitoes begin to move and stream towards light.

We made use of this phenomenon and closed all doors and windows of a room and darkened it further with sacks or blankets, except for one window which remained closed but uncovered.

The mosquitoes in the room, attracted to the light outside, moved at dusk towards the window and were lightly crushed by hand against the glass, counted and identified.

3. The above mentioned observation (2) gave us the idea of using this method for easily trapping and identifying mosquitoes in a room at other hours of the day.

A room was prepared as outlined above and sprayed very lightly here and there with a small perfume spray consisting of an alcoholic extract of pyrethrum at a very low concentration.

This excited the mosquitos to leave their resting places and to escape towards the light source, the single uncovered window,

where they could be lightly crushed and identified.

4. Today we use wooden boxes affixed to the ceiling on a semi-dark, non draught corner. The lower half of the front wall of the box is open. The weak light and the more even temperature and humidity inside the boxes offer the mosquitoes better resting conditions than in the rest of the room and they concentrate there. From the boxes they are easily recovered and identified.

The use of traps affixed to windows for trapping mosquitoes is widespread throughout the world and no description is needed here.

Recently, we were interested in beginning observations on the habits of *Culex pipiens molestus* mosquitoes breeding in cesspits in enormous numbers.

Many years ago, one practice in Israel was to kill the adults there by a primitive method, namely, by inserting a kerosene-impregnated rag set on fire, within the cesspits. However, as the cesspit was not completely air tight at the surface, many mosquitoes escaped. This gave us the idea, that a very light smoke within the cesspit would drive the mosquitoes out and if a trap were to be set over the opening of the cesspit, the mosquitoes would be trapped. We found that a standard type mosquito cage was not suitable for this purpose.

We therefore began to use a modified fly trap of the cone type which has so far given excellent results. The diagram of the trap is attached herewith and full particulars are shown thereon (Figure 1).

Note, that this trap differs from the standard fly cone trap in the following respects;

(1) The base is solid sheet metal extending beyond the side. The opening

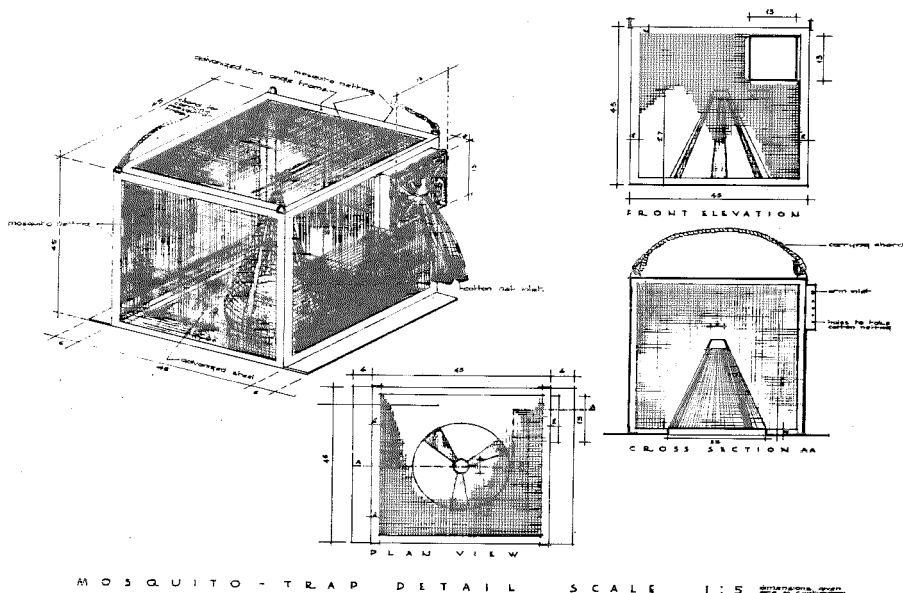


FIG. 1.—Details of mosquito trap:

giving entrance to the cone and admitting light is in the centre of this base. Even better results were obtained by using a wider cone than the one described on the diagram. This larger cone measures 30 x 25 x 2.5 cm.

(2) The upper corner of one of the walls has an arm-inlet through which a large glass suction tube can be inserted for removing the mosquitos.

This trap is placed over the opening of the cesspit during the daylight hours, beginning from about one hour after sunrise. Large numbers of mosquitoes are attracted to the light, enter into the trap

and cannot escape. To what extent the use of smoke would increase the catch, awaits further observations.

SUMMARY

1. Some practical methods of trapping adult mosquitos for survey purposes are given.

2. A method of trapping adult mosquitos breeding in cesspits, by means of a light trap, a modified fly trap of the cone type, is described.

3. Details of the trap are given and shown in a diagram.