

As will be seen from the dates given, these experiments extended over a short time only, having been terminated by the advent of a period of cold weather which checked the flies' activity. Nevertheless they are of value as indicating the possibilities in the way of the range under normal city conditions. There is no doubt that given the necessary conditions with regard to wind and elevation above the ground the range would be considerably greater than was actually found in these experiments. The greatest range of flight obtained in these experiments, namely, 700 yards, represents an actual flight of considerably greater distance than is represented by a straight line from the place of liberation to the point of capture.

Chief Breeding Places of Flies in the District.—The chief breeding places on a large scale are shown on the map as shaded areas. The western extremity of Porters Island was used as a garbage dump (C) until June, 1911, this being about 170 yards from the isolation tents and hospital. Between the end of Water Street and the Rideau River garbage was being dumped (A), a large proportion of which consisted of stable refuse (horse manure). At this place, which is about 530 yards from the hospital, flies were found breeding in considerable numbers. At the foot of St. Andrew Street, adjoining the river and about 270 yards from the hospital, about 100 tons of horse manure and compost had been dumped (B). There were in addition numerous breeding places apart from an unusually large number of unprotected heaps of horse manure in stable yards. Consequently, flies were extremely abundant on the island and throughout the district.

The Relation of the Range of Flight of Flies to the Situation of the Isolation Hospital.—The significance of the question of the range of flight of flies as bearing upon the position and protection of isolation hospitals is too obvious to require further explanation. In the present instance Porters Island is used for the isolation of smallpox cases. The hospital consists of a wooden house capable of accommodating a few cases only; during a slight epidemic which occurred in the past summer cases were isolated in tents. There was no possibility of protecting the patients from the attentions of flies, or of mosquitoes which also occur-

red in enormous numbers and may be even more potent than flies as carriers of the causative organism of smallpox, whatever it may be.

Isolation hospitals should be carefully screened in hot weather, and every effort made to prevent the access of flies either to patients or to infective matter, especially as so little effort is made at present to protect food and infants from the attentions of flies.

A Pioneer in Sanitation.

Amongst the Pepys manuscripts, says *The Builder* (London, England), preserved at Magdalene College, Cambridge, and calendared in the latest volume issued by the Historical Manuscripts Commission, there is a remarkable paper on the sanitation of London written in Italian by one Alessandro Riccardy. It is undated, but from the dates of the other documents amongst which it appears must have been composed in the early part of the seventeenth century. As Mr. E. K. Purnell, M.A., who edits the volume, remarks, the paper is obviously "much in advance of the times." The following is a summarised translation of the curious document:—

Knowing the importance of good air, and having great affection for London, he wishes to put forward an easy plan for keeping that city free from the filth which affects its air. The Romans took great care in this matter, as do the Venetians now.

The situation of London, especially in the part of the royal palace, makes this easy, but a stop should be put to the washing of clothes and of flesh, and of other businesses of the kitchen.

As is shown by his model, all the aqueducts of the houses, those of the wells and those of the kitchens, terminate in a receptacle in the most convenient part of the courtyard. Rain may be allowed to go uncovered to the said receptacle or through the streets, as is usual, but the water of the wells and that of the kitchen, in order to avoid constant damp and smell in the house, must disappear in the same spot—that is to say, in the kitchen, and at the foot of the wells there will be made a hole into which the water will pour; from this a little underground channel will carry the water, by its own weight, to the