Pyrophosphate esters of geraniol have been identified as intermediates in the synthesis of squalene from acetate in the rat liver enzyme system[6]. However, this is the first reported occurrence of free geraniol in animal secretions.

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An Aphid Flight Chamber

In studying the settling responses of winged aphids and their reactions to different host conditions it is desirable to use insects which have flown freely. Kennedy[1] mentioned a chamber for giving single aphids flight exercise, and the same author[2] has recently described a modified apparatus for maintaining a swarm of flying aphids for experiments on optomotor attraction.

In the chamber described here a large number of aphids can be allowed to take off, fly freely and alight naturally on plants.

The chamber (Fig. 1) is made of hardboard bolted to an angle iron frame, the inside walls, roof and floor being coated with blackboard paint. The floor is raised off the ground so that the observer can sit in the hatch. A 12-in. aerofoil fan blows air into the chamber through a cloth screen on the bottom of a box set in the roof. The cloth screen is of blue terylene with 100 threads of about 105μ diameter per inch. The box has two sloping glass sides; above each are hung two 400-W. high-pressure mercury fluorescent lamps (not shown in Fig. 1) which shine into the chamber through the glass and cloth. Air speeds measured within the chamber are 2 ft./sec. 3 in. below the cloth, 1·5 ft./sec. 12 in. below and 0·5 ft./sec. 24 in. below.

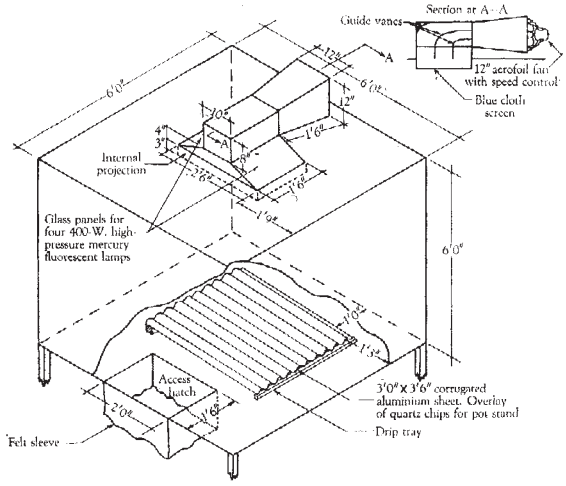

Fig. 1

Myzus persicae last-instar nymphs are put on tobacco seedlings in 1-in. pots on the stand on the floor of the chamber; about 150 pots can be accommodated. After the last moult and on completion of the teneral period, the aphids have taken off and flown for up to 85 min., alighting again on the plants and settling down to reproduce. Most first flights have lasted between 40 and 70 min. The aphids fly at varying heights between one and four feet from the floor of the chamber. The mean height at which they fly seems to depend on their size and for very large ones the airflow has to be increased slightly. Generally all aphids reared under the same conditions fly at the same height and it is not necessary to adjust the fan speed during the course of an experiment.

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GENETICS

Variation of Bristle Number in Relation to Speed of Development in *Drosophila melanogaster*

The bristle number of the fourth and the fifth abdominal segments of *D. melanogaster* is interesting for two reasons:

(1) The character has been examined extensively in quantitative genetics[1–3].

(2) Bristles are connected with bipolar cells of the nervous peripheral system[2,4] and as such they parallel morphogenetic variations of the tangoreceptor organ, in so far that variations in the area studied reflect variations on the whole body surface.

Some authors[2,3] have attributed the fluctuation of bristles to a low number of genes while a residual variation is imputed to the so-called 'genetic background'. The residual variation requires further definition. Since it is considered to reflect a variation in the development of the nervous system, it could possibly be linked with such a fundamental trait as duration of development.

In order to verify an eventual relation between bristle number and development time a hundred pairs from the stock Canton Special, hatched within 10 hr., were collected. Considering the results of Durrant[5], eggs were procured from flies of a given age, namely, 5 days after pupal hatching. These flies were allowed to lay on the same medium for 14 hr. and discarded afterwards. The eggs were maintained at 25° C. and the pupal hatchings regularly recorded. The correlation coefficients between bristle number and duration of development were found to be $-0{\cdot}281$ ($P < 0{\cdot}01$) for the males and $-0{\cdot}344$ ($P < 0{\cdot}01$) for the females. The difference between these coefficients is not significant. In fact, this relation was not retained because the use of speed of development, that is, the reciprocal of duration of development, leads to a better fit (Fig. 1). Using time of development, the ratios of the variance due to regression on the residual variance are 27·9 (males) and 44·8 (females). These variance ratios increase to 34·1 and 47·4, that is, the fitting of the regression increases in