

water. Crowding proceeded from about 400 in a nursery bowl (6in diameter) at hatching to 75 per pan (16in x 8in x 2in) beyond the second instar. At 27°, the feeding schedule yielding best results was the following:

- Day 1 Hatch 300–500 eggs in 6in bowl with 75% sea water.
Feed 50mg liver, 50mg yeast, 1 unground dog-food pellet* (40–50mg).
- Day 2 No food.
- Day 3 No food. Larvae now 2nd instars.
- Day 4 Pour into regular pan (16in x 8in x 2in).
Feed 50mg liver, 50mg yeast.
- Day 5, 6 Feed 50mg liver, 100mg ground dog food.
- Day 7, 8 No food. Larvae moulting into 3rd instar.
- Day 9 Separate 3rd instar larvae, 75 per pan.
Feed 50mg liver, 50mg rabbit food†, 50mg ground dog food.
- Day 10, 11 Feed 50mg liver, 50mg rabbit food, 50mg ground dog food.
- Day 12-17 Feed daily 50mg rabbit food, 50mg ground dog food.
- Day 18 Stop feeding. Concentrate stragglers in one pan.

This regime should yield maximum-sized adults with as synchronized and short a pupation interval as can be achieved. The larval period should approximate 15 days and all pupation should occur within an 8-day interval.

Larval Behaviour

The larvae normally spend over half their time on the bottom of the rearing pan. They feed mostly by scraping food off the bottom (hence food should be wetted before introduction to rearing pans) but they also hang at the surface and obtain suspended particles of food by straining water through the mouth brushes. Normal wiggling movements are rather slow, but if disturbed they move very rapidly. They like to have a stone or dark object to retreat under.

We found no evidence of carnivorous or cannibalistic behaviour, as reported by Kirk (1923). As in many other mosquito species, the larvae were to some extent scavengers on dead animals, however.

THE PUPAL STAGE

Duration

The duration of the pupal stage was 72 hours at 27°, 96–105 hours at 20°, and 12 days at 12°. These data were for pupae resulting from adequate larval diets.

Attempts were made to synchronize emergences by retarding early pupae in cold water. Pupae transferred from 27° to 12° immediately after pupation showed about 10% mortality, but if transferred 3 to 6 hours after pupation they all survived. Synchronized emergences brought about in this manner were a great help to the accumulation of equal-aged samples of adults for biochemical analyses.

* "Gaines Dog Chow" was used.

† "Purina" brand was used.