

The mean daily consumption, calculated after subtracting the evaporation values and expressed as g of sucrose ingested by a fly in a day, is:

males	24.36 ± 2.26	n=25	(extreme values 5.6 and 43.6)
females	30.60 ± 2.30	n=44	(extreme values 1.6 and 75.8)
both sexes	28.34 ± 1.71	n=69	

Although the daily intake is a little higher in females than in males, the difference is not significant, probably because of the enormous variability of the results.

It was supposed that the flies, ingesting for unknown reasons a very low quantity of sucrose, would take an insufficient amount of food and die prematurely. To check this hypothesis, the flies were divided into 3 groups, according to the amount of sucrose ingested, and the percentage of mortality at 20th day was calculated as indicated below.

low consumption group (from 1.6 to 20)	mortality percent	: 29.9	n = 87
middle " " (from 20.1 to 40)	" "	: 24.2	n = 157
high " " (from 40.1 to 75.8)	" "	: 27.8	n = 54

From this it appears that there is no correlation between survival and quantity of sucrose ingested. In other experiments, where flies were fed in a usual way with a sugar-agar medium, the mortality at 20th day ranged from 12.50% to 47.50%. Thus feeding the flies with a solution in a capillary probably does not reduce longevity. However, if only water is given to flies, their mean survival is only 4 or 5 days.

Two other observations may be indicated here, although they are to be considered only as preliminary conclusions.

First, by pooling the whole data, a small, progressive decrease in sucrose ingestion was observed, from the beginning to the end of the experiment. It is therefore supposed that aging reduces food intake.

Second, the study of the influence of sucrose concentrations gave different results according to sex. In females, increased concentrations result in an increase in the quantity of sucrose ingested. In males, however, the mean daily consumption was quite stable, over the range of concentrations from 4 to 12%. Of course, such a stability corresponds to an important variation in the volume of ingested liquid.

These experiments are still in progress and various improvements are being tried in order to reduce evaporation and to improve the accessibility of the nutritive liquid to the flies.

Tsacas, L. C.N.R.S., Gif-sur-Yvette, France. Some data upon the morphology and biology of *D. picta* Zett.

The breeding of *D. picta* was carried out in 1962, from flies captured in Brittany (France). Since then, its morphology and biology have been studied in our laboratory; some of their particulars are given here.

The egg shows two pairs of filaments; the upper one is slightly shorter and more tapered at the extremity. The mature larva shows, on its terminal segment, six pairs of tubercles, plus an odd median anal tubercle: dorsals very small, dorsolaterals, ventrolaterals and ventrals very big, anals, plus one smaller median, siphonals. The anal plate (circumanalis) is narrow and elongated.

The pupa, ochraceous-yellow, is 3.4-3.7 mm long, respiratory horns not included. Horn-index is 5-8.4 mm (M = 6.1).

Wing-indexes: costal-index 3-3.53; 4th vein-index 1.23-1.61; 4c-index 0.61-0.94; 5x-index 0.87-1.14. Sterno-index 0.8-0.88. Testes almost colourless, big, with only one coil; ejaculatory sac with two diverticulae. Ovaries with 12-20 ovarioles. Spermathecae small, almost spherical. Ventral receptacle with 4-5 coils. Malpighian tubes joined in two pairs, common trunks short; the anteriors free, the posteriors united, with common lumen.

The length of the cycle, from egg-laying to hatching of the imago, is 20-29 days (M = 23) at a temperature of 20°C. It is thus decomposed: egg, 24-48 hours; larva, 7-15 days (M = 13); pupa, 5-8 days (M = 6). At a temperature of 25°C, the length of the cycle is reduced to 13-20 days.

Appropriate experiments allowed us to make the following observations: there is a very long lag between the hatching of the adult and the first egg-laying, a relatively short length of life, and a restricted fecundity (315 eggs laid during 68 days of life).

Chromosomes: metaphase plate shows 2n = 12. Those from the salivary glands show 4 long arms and 1 dot.