indicate that this compound belongs to the yellow pigment group.

The other spot (A.S.) is found in 4 among the 12 strains described. Car, Hn^{r3}, se and 95/2, being in the two last strains in a low concentration which seems to indicate that it may be present in most strains but it is not detected for not reaching the necessary level of accumulation. It is colourless and has a blue fluorescency, as Rf = 0.35 and 0.32 respectively. This spot is found in the strains car and Hn^{r3} in 80-90 hours old pupae at low concentration, attaining its maximum concentration in newly emerged flies and disappearing in adult flies from the third day on. In strains se and 95/2, the spot appears at the beginning of adult life at very low concentration, and disappears in adult flies from the third day on. The fact of this compound appearing in a development phase and disappearing after, seems to indicate this spot is an intermediate in the metabolic pathway which leads to drosopterins.

Work is in progress to further studies on these two spots in our laboratory.

Moya, A. & J.L. Mensua. University of Valencia, Spain. Dynamics of larval competition process: the overfeeding technique in Drosophila.

The overfeeding technique has been designed in order to analyze experimentally what happens in competition conditions cultures. Basically it consists of a break in the competition conditions, giving us information about the dynamics of larval competition process.

The experimental procedure was the following. Seventy larvae aged 2±2 hr were placed in two kinds of vials: large vials (10x2.7 cm) containing 5.0 ml of Lewis' medium and small vials (4x0.8 cm) with 0.5 ml of same medium. The large vial was considered as control in non-competitive conditions. Nine small vials, working at 25±1°C, were prepared, one of them not overfed and considered as control in highly-competitive conditions. The other eight small vials were overfed. The overfeeding technique (see Figure 1) was as follows: the small vials were transferred singly to a large vial with inclined food (overfeeding vial), a total of

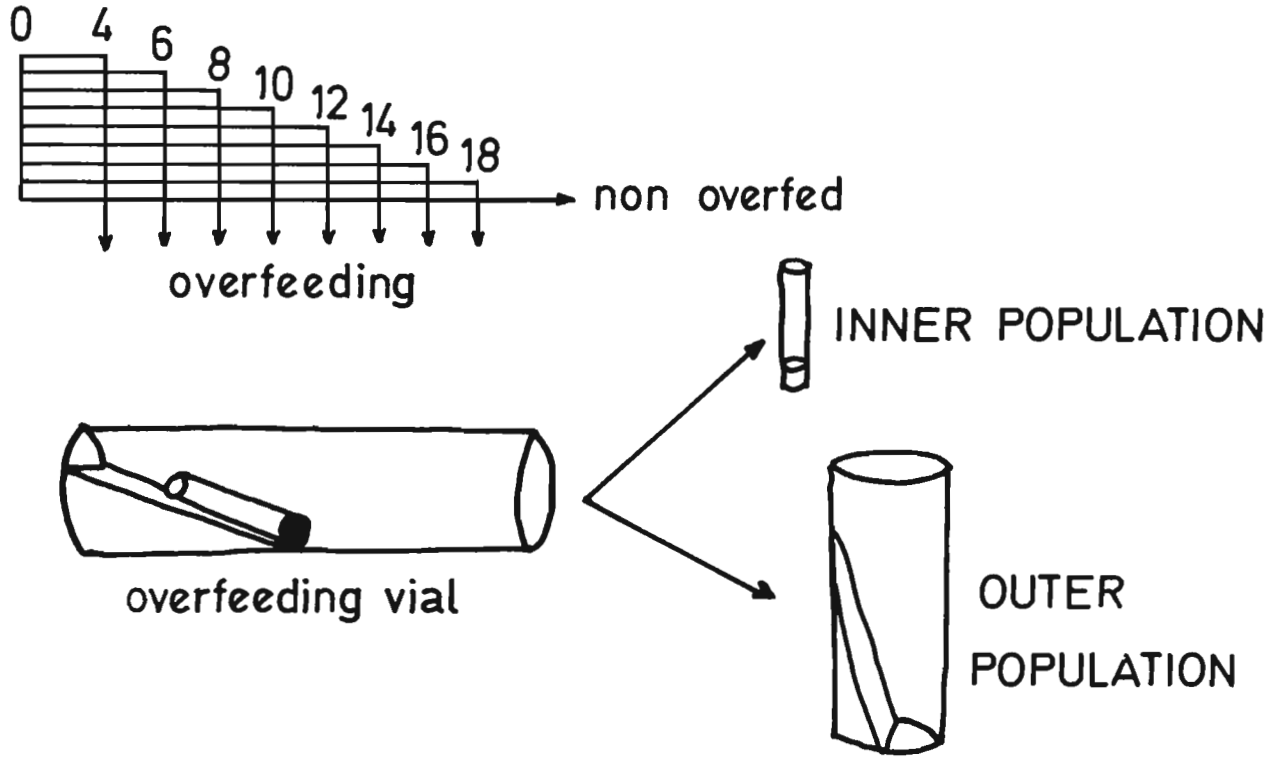

Figure 1. The overfeeding technique.

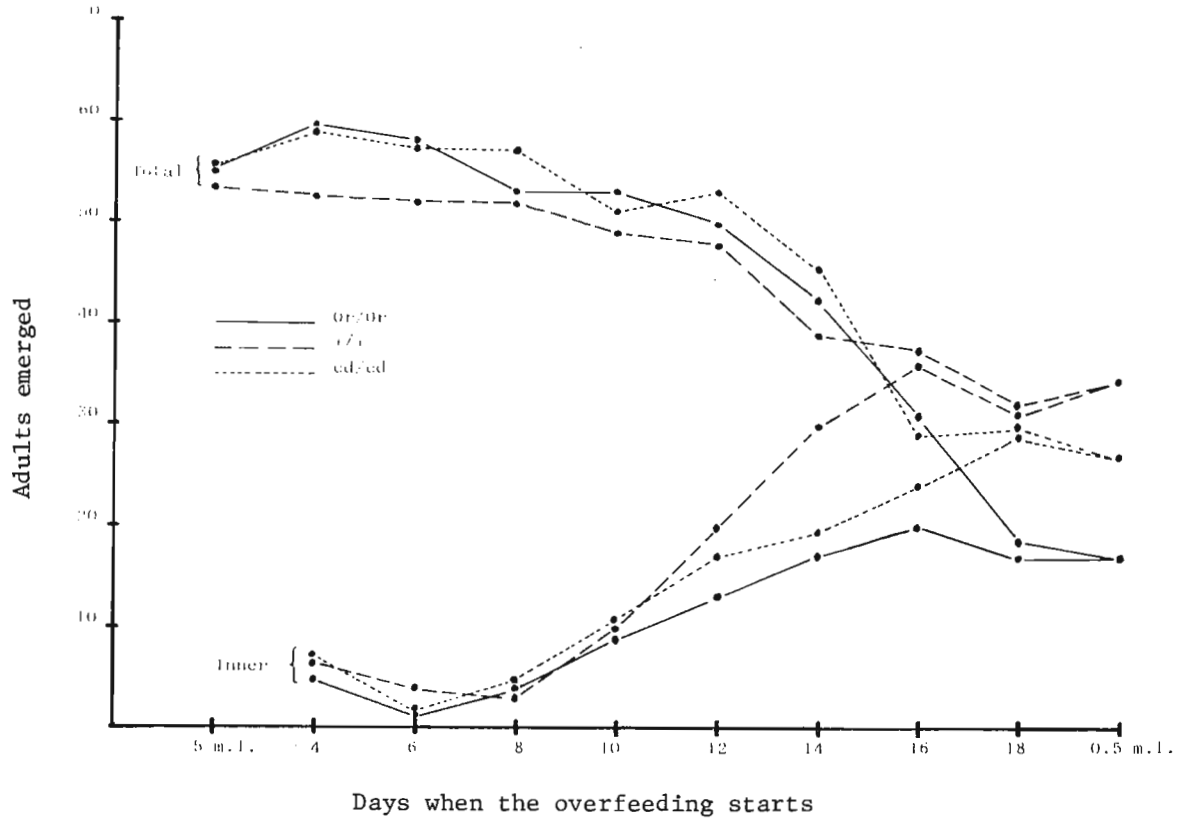

Figure 2. Number of adults emerged in inner and total (inner+outer) populations of Or/Or, +/+ and cd/cd for the two controls and the different overfeedings.

eight separate occasions. The first small vial was introduced into the overfeeding vial on the 4th day of culture, the second one two days later and so on until 18th day when the last small vial was overfed. After 24 hours contact between the two vials was interrupted by taking away the small vial. All larvae migrated spontaneously and rapidly to the overfeeding vial except a very few which stayed in the small vials when the overfeeding was carried out on the 4th and 6th days.

In this way the population was separated into two groups: the inner population, composed of larvae near pupation, pupae and adults, and the outer population, composed of those larvae which had emigrated to the overfeeding vial. Emerging adults were counted and removed every day up to the end of the culture in the four kinds of cultures (control of non-competition, control of competition, overfed small vials and overfeeding vials).

This procedure has been used not only for larvae of D. melanogaster at 25°C, but also in D. melanogaster, D. simulans and D. subobscura at 19°C. In general this procedure could be used to study the process of larval competition of any insect, changing temperatures, competitive food doses and number of overfeedings according to the length of larval period.

Figure 2 shows adults emerged in inner and total (inner+outer) populations for three laboratory strains: Oregon-R, +/+ and the eye-colour mutant cd/cd. For each kind of vial a total of eight replicae was made. This kind of information permits us to contrast the mortality-process and the dynamics of the competition process from an experimental point of view.