

Research Notes

Auerbach, C. Studies on egg shape and fecundity in *D. funebris*.

The mutant spheroidal was investigated. The eggs are short and roundish, the filaments are short and stiff and do not spread out as in normal eggs. At the same time fecundity is very low.

Hatchability appears to be good. Spheroidal segregates as a simple Mendelian autosomal recessive. Investigations have been started to study its effects more in detail, with a special view as to the nature of the connection between the morphological character "shape of the egg" and the physiological one "low fecundity."

G. Bonnier and M. Nordenskiöld. Attached X's.

Selections have been performed in order to get different percentages of homozygosis at the yellow-locus. In this way a high and a low line have been established.

In 466 cultures of the high line this percentage is 22.80 ± 0.34 and in 474 cultures of the low line the percentage is 17.72 ± 0.24 . This selection has at the same time produced a selection of the rate of detachments. Within the same cultures there has been a total of 3 detachments in the high line, and 858 detachments in the low line. Investigations concerning the genetical causes are now under hand.

Brehme, Katherine S. A method for counting the larval instars in mutant stocks of *Drosophila*.

It has been suggested that a fourth larval instar might explain the increase in duration of the larval period of certain mutant types beyond that of the wild type, in *D. melanogaster*. Such mutants include heterozygous Mw, with a larval period about two

days longer than that of Δ sib at 25° C, and giant, which pupates three to five days later than non-giant sib at 25° . The following method has been devised for ascertaining the number of larval instars.

A thin layer of Pearl's S 101 medium is placed in a three-inch Petri dish and sown with one drop of yeast suspension. Ten eggs are cultured in each dish at 25° . When all larvae in the culture have pupated, the pupae are removed to paper spoons containing a 2% solution of agar (for moisture supply) and are kept in cotton stoppered shell vials until the adults emerge, when the adult phenotypes can be recorded. After removal of pupae, each dish is examined on a white background under the binocular (9 x ocular, 2.3 x objective); the molted mouth armatures are easily seen on this almost transparent medium. A piece of graph paper under the dish affords a means of orientation, so that the entire dish can be thoroughly examined. In this way it is