

Gress, R.E.* and H. Nickla. Creighton University, Omaha, Nebraska. Choice of oviposition sites by laboratory strains of *Drosophila melanogaster*.

Previous observations in our laboratory indicated oviposition behavior varied consistently among laboratory strains of *D. melanogaster*. Four stock populations (maintained by standard mass-culture methods) were used to determine the reliability of these observations: w (1-1.5)

lt (2-55.0), cl (2-16.5), and In(2L+2R)Cy. For each replication, ten virgin females and one male were selected from each of the above strains. Virginity was the only criterion for selection of females. After 48 hours of "preincubation" with the respective males, the males were removed, and the females from the various strains were mixed. After 36 hours the 40 females were allowed to lay eggs on Stendor dish lids which had been previously filled with standard medium and covered with a yeast-soaked, circular piece of paper toweling. At 24-hour intervals the eggs were removed from the toweling, separated by pattern, and placed in medium-containing shell vials. Placement patterns of eggs were characterized as to solitary, double (two eggs in contact), or clumped (three or more eggs in contact). Resulting offspring were scored by strain. Table 1 presents the mean percentages of single and clumped egg placement for the various strains. Arcsin transformations were used on all percentage data prior to statistical analyses.

Table 1. Percentage of single and clumped egg placement among four laboratory strains of *D. melanogaster*.

Strain	Replications*	SINGLE		CLUMPED	
		Mean	95% Confidence interval	Mean	95% Confidence interval
cl	14	12.5**	± 6.5	80.0**	± 8.0
In(2L+2R)Cy	13	31.0	± 10.0	51.5	± 11.5
w	10	30.0	± 11.0	54.5	± 12.5
lt	14	24.5	± 8.5	60.5	± 10.5

* Variation in the number of replications resulted from variability in production of offspring.

** Significant at the 0.05 probability level.

Different preferences for egg placement exist among the four strains studied. Although all strains favored clumped egg placement, clt was sufficiently prejudiced against solitary egg placement to differentiate it statistically from the other three strains. The genetic basis for the selection of oviposition sites is presently under investigation. (Supported by a grant from the National Science Foundation to Creighton University.)

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McCrary, E. III. University of North Carolina, Greensboro. Thoracic macrochaet variation in *D. virilis*.

Recent transplants of wing discs from a stock of *D. virilis* (McCrary, 1973) have revealed a regular reduction in the number of macrochaetae produced. Such a reduction was also reported earlier (McCrary, 1971) following in situ operations on the right wing disc.

A pilot study of normal variation of each of the 11 macrochaetae on the right side of adults of both sexes has been completed. Of 2483 animals examined, 2391 (96.4%) had the normal complement of bristles. 74 animals (2.98%) lacked both the anterior notopleural bristle and its socket. 12 animals exhibited split notopleurals or extra macrochaetae located between the normal sites of the anterior and posterior notopleurals. No such variation was seen at any of the other nine macrochaet locations, with the exception of one case of a missing dorsal supra-alar bristle on a male. It is thus possible that the area of maximum variation in macrochaet location and development is centered in the distal portion of the thoracic blastema (see fate map of Murphy, 1972), close to the point at which the tracheal supply enters the disc. Further studies are in progress to determine the genetic source of this variation, and to measure its extent in *D. melanogaster*.

References: McCrary, E. 1973, *J. Insect Physiol.* (in press); _____ 1971, *DIS* 47:76; Murphy, C. 1972, *J. Exp. Zool.* 179:51-62.