

Kitagawa, O. Tokyo Metropolitan University, Japan. Heterozygous effect of natural lethals accumulated on second chromosomes of *D. melanogaster*.

Twenty second chromosomes with at least one recessive lethal were extracted from the natural population of *D. melanogaster*. Double, triple and quadruple lethals were accumulated in cis-phase on second chromosomes through recombination of females

with two or more lethals in trans-phase. Preadult viability of wild phenotype flies were determined by the Cy-Pm technique. Following results are obtained:

No. of lethals per zygote	No. of crosses	Preadult viability (Cy/Pm = 1.0000)
0	55	1.0281 ± .0116
1	33	1.0147 ± .0239
2	65	.9782 ± .0185
3	57	.9524 ± .0269
4	45	.9170 ± .0223
5	37	.8391 ± .0365
6	12	.8092 ± .0664
7	7	.7367 ± .1078

This synergistic interaction between lethals compared to induced ones is very relevant to the problem of the maintenance of genetic load in natural populations.

Burckhardt, B. and E. Hadorn. Zoologisches Institut der Universität, Zürich, Switzerland. The ductus ejaculatorius of *Drosophila melanogaster* as a test object for physiological media.

Genital apparatuses of young adult males have been prepared free and immersed in different salt solutions. Quality and persistence of movement of the ductus ejaculatorius are used as the criteria of the quality of media.

Our table shows how long "normal" and declining movements are maintained in vitro in a few of the tested solutions (room temperature). Solution component quantities are given for 1000 cc aqua bidest.

Medium	Movement	
	"normal"	declining
1. Holtfreter: NaCl 3,5 g CaCl ₂ (2 H ₂ O) 0.066 g KCl 0.05 g NaHCO ₃ 0.2 g	0 - 15 Min.	until 10 h
2. Insect Ringer: NaCl 7.5 g KCl 0.287 g CaCl ₂ (2H ₂ O) 0.287 g	0 - 60 Min.	until 29 h
3. NaCl:		- - -
1 - 3 g		10 - 14 Min.
4 - 8 g		7 - 9 Min.
9 - 10 g		1 - 3 Min.
11 - 15 g		- - -
16 - 20 g		- - -

Among many others of the tested combinations, "Insect Ringer" proved to be the best medium.