

Cross used (x cn vg sf ² ♂)	Total counted	Confirmed non-vg	Distance (map units)
vg ^{np} /cn vg sf ²	30,389	4 cn+++	0.026
vg ^{nw} /cn vg sf ²	9,813	2 ++++sf	0.041
vg ^{E7} /cn vg sf ²	14,567	0	-
vg ^{NO2} /cn vg sf ²	7,145	0	-
vg ^{np} /cn vg ^{E7} sf	4,402	0	-
vg ^{nw} /cn vg ^{E7} sf	13,257	0	-
vg ^{NO2} /cn vg ^{np} sf	16,234	0	-

$$\begin{bmatrix} \text{vg}^{\text{E7}} \\ \text{vg}^{\text{NO2}} \end{bmatrix}$$

←0.026→ ←0.041→

vg^{np} vg vg^{nw}

Stocks of cn vg sf² were made to provide suitable markers for a four-point test (cn = 2,57.5; vg = 2,67.0; sf² = 2,71.5). The alleles vg, vg^{np}, vg^{NO2}, vg^{nw}, and vg^{E7} were used in a series of crosses utilizing the cn and sf markers. The results so far establish the pseudo-allelic nature of the vestigial region with three sites mapped. Two alleles, vg^{NO2} and vg^{E7}, have not yet been separated. The vg^{E7} allele shows a strap allele when heteroallelic with vg. It was induced by ethyl methane sulfonate and it is phenotypically normal as a homozygote. Its failure to undergo pseudoallelic crossing-over with vg, vg^{np}, and vg^{nw} suggests that it might be a minute intragenic rearrangement. Similarly, vg^{NO2} does not crossover with vg or vg^{np} and may be a minute rearrangement. When vg^{nw} is crossed to vg^{NO2} the heteroallele, vg^{nw}/vg^{NO2}, does not appear and is thus inviable at both 18°C and 25°C.

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Choo, J.K. Chungang University, Seoul, Korea. Genetic change of Korean natural population of *Drosophila melanogaster*.

1977 in the Banweol area. The frequency of lethal plus semilethal second chromosomes had been about 28.2% in the 1971-1973 period at Anyang City. It then increased directly through three years and the population maintained 48.6% of L+S1 content in 1977. In the natural population of Ulsan City, the L+S1 content has been 65.7% to 53.4% in the 1975-1977 period. On the other hand, the frequency in the Banweol population was 26.0% in 1977, low compared to other populations.

All second homozygote viability consisting of lethal genes had been 22.3% in the Anyang population in 1971, and then its rate decreased annually to 14.6% in 1977. On the contrary, the Ulsan population maintained about 15.0% on the average in 1975-1977, and 24.8% occurred at Banweol in 1977.

The allelism rate between lethals isolated from the Anyang population has maintained unchanged at about 1-2% during the past six years. However, allelism rate of the Ulsan population decreased from 5.66% in 1975 to 1.47% in 1976.

The frequency of individuals eliminated by deleterious genes in the natural population was estimated to be IQ^2 , where I and Q are the L+S1 frequency and allelism rate for successive years. The elimination rate in the Anyang population increased by two times during six years, from 0.04% to 0.08%. Moreover, in the Ulsan population it occurred 2.44% in 1975.

Clyde, M. University of Queensland, Brisbane, Australia. The chromosomes of *Drosophila rubra* Sturtevant.

reddish color occurs on the frons, antennae, mesonotum, scutellum and abdomen. The pleurae and legs as well as face, cheeks and mouthparts are yellow.

Five isofemale lines, from Hidden Valley Springs, Luzon (adjacent to the original collection site at Mt. Maquiling) were analyzed. The salivary chromosome configuration of *D. rubra* comprises four long arms and one short arm (Fig. 1). In one isoline a small, simple inversion in the central region of chromosome III was detected (Fig. 2).

The frequency of recessive lethal genes on the second chromosomes concealed in natural populations of *D. melanogaster* has been analyzed annually. Surveys have been made since 1971 in Anyang City, since 1975 in Ulsan City, and since

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D. rubra, a member of the *D. immigrans* subgroup (Wilson et al. 1969) was described by Sturtevant (1927) from the type specimen collected at Mt. Maquiling, Luzon, Philippines. The flies are yellowish with a reddish tinge. The dull