

Karlik, A. University of Vienna, Austria. Missing recombination in the X-chromosome of *D. ambigua* between two non-allelic mutant genes determining the eye-color.

Although many members of the obscura-group of *Drosophila* are genetically well investigated, very little is known about the genetics of the European *D. ambigua* Pom. Several mutants have been collected during the past years in our laboratory. For the sex-chromosome seven different

mutants could be found, of which six have been already described earlier: *w, y, or, ct, px, N* (Karlik 1958). A new mutant spontaneously arisen in a laboratory strain was isolated and may be described here:

*v*: vermillion, recessive, sex-linked. Bright red eye color, but normal color of ocelli, testes and Malpighian tubes.

Recombination frequency was checked between *v, or* and *y*. The frequency of the different recombination types is given in the following table.

Test cross	n	recombinants
<i>y or/++♀ x y or♂</i>	16,233	4.57%±0.16
<i>y v/++♀ x y v ♂</i>	4,614	6.84%±0.37
<i>+ v/ or + ♀ x or + ♂</i>		0
	11,642	
<i>+ v/ or + ♀ x + v ♂</i>	(♂ only)	0

From the first two crosses it may be assumed that *v* and *or* are mutants of different closely linked genes. This assumption is confirmed by the fact that females heterozygous for *+ v/or +* show the normal phenotype. Yet, there are no recombinants in the crosses between *or* and *v*. Since *v* and *or* were on different chromosomes in the heterozygous females, only ++ recombinants were looked for among the male offspring. The phenotype of the combination *or-v* is unknown but no new eye color could be seen in the crosses. Among 11,642 males only *v* and *or* males could be observed.

A number of salivary gland preparations were made of female larvae heterozygous *+ v/or +* and the giant chromosomes analysed. Although several autosomal inversions could be observed, none was present in the X-chromosome. There were no striking other abnormalities in the giant chromosomes. So the assumption that the strong linkage may be due to a chromosomal aberration can be excluded.

Karlik, A.: Vererbungsversuche mit *D. ambigua* Pom. Z. Vererb.-Lehre, 89:448-458 (1958).

Kaneko, A., E. Momma, T. Tokumitsu and T. Shima. Hokkaido University, Sapporo, Japan. Frequencies of abundance of the quinaria species group in Hokkaido and Aomori Prefecture.

During the ten years, drosophilid flies have been collected actively from many localities in Hokkaido, and in Aomori Prefecture, northern part of Honshu. Quinaria species is one of the common *Drosophila* in Japan. Total flies and percent-

age frequency of each quinaria member in Hokkaido (samples are from 33 localities) and Aomori Prefecture (from 3 localities) are as follows:

	No. of flies of quinaria group	Percentage frequency				
		<i>nigromaculata</i>	<i>brachynephros</i>	<i>unispina</i>	<i>angularis</i>	<i>kuntzei</i>
Hokkaido	19002	79.93	17.90	2.16	0.00	0.01
Aomori Prefecture	436	8.03	16.74	2.75	72.45	0.00

In Hokkaido *D. nigromaculata* was very frequent in occurrence in all localities. On the contrary, *D. angularis* was so frequent in Aomori, this has not yet been obtained in Hokkaido in spite of extensive collections. *D. kuntzei* has been recorded from all over Japan, though it is a rare species in occurrence.