

were present in equal ratios. The number of $+/+$ $\delta\delta$ was in both cases about half the number of other classes and only one or two e/e $\delta\delta$ & $\phi\phi$ were recovered. Abnormal ratios have been observed through three more generations. The second mosaic was a lobed eye phenotype associated with all classes in one vial from another test group. Further tests will be performed to determine if a chromosome aberration is responsible for these two cases.

Although only a few cultures were tested from the stored mature sperm, it is clear that there is a storage effect of EMS on translocations in mature sperm. It is interesting to note that the mosaics recovered were also found in the stored sperm sample.

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Chadov., B. F. Institute of Medical Radiology. USSR. Preliminary data on 2 chromosome aneuploidy in XXY females of *D. melanogaster*.

Development of a 2-2 egg or 0 egg is possible only in case of fertilization by complementary male gamete. Males bearing isochromosomes 2 produce 50 per cent of aneuploid gametes 2-2 and 0, which enables to use these males to trace

2-2 and 0 gametes in XXY females. As the remaining half of the male gametes bears only one isochromosome 2, all the euploid eggs will be dominantly lethal. In the first experiment 456 females $In(1)dl-49+BM1$, $sc v BM1/sc^7 v f/Y^{BS}$ were crossed to $C(2L)RM,b;C(2R)RM,cn$ males. The progeny (comprised of 11 individuals) included the following phenotypes: 2 $\phi\phi$ $sc;b cn$, 1 ϕ $v sc$, 1 ϕ $b cn$, 3 $\sigma\sigma$ $sc v BM1$, 2 $\sigma\sigma$ $sc v f$, 2 $\sigma\sigma$ BS . In the second experiment 384 females $In(1)dl-49+BM1$, $sc v BM1/sc^7 v f/Y^{BS}$; $SM1,Cy$ were crossed to similar males. The progeny (comprised of 231 individuals) is shown in the table:

	<u>Reg.females</u>		<u>Reg.males</u>		<u>Exc.females</u>	<u>Exc.males</u>
	XX	XXY	XY	XXY		
Matroclinic 2-2 (Cy)	75	--	76	-	2	26
Patroclinic 2-2 (b cn)	1	15	-	19	16	1

The obtained preliminary data show that heterozygous inversion $SM1,Cy$ in XXY females increases the frequency of the 2 chromosomes non-disjunction by more than an order of magnitude. Further, it may be suggested that in the process of aneuploid 2 formation in $XXY^{BS};SM1,Cy$ females a considerable role is played non-homologous pairing of X-2 and Y-2.

Wakahama, Ken-Ichi¹, Osamu Kitagawa², and Costas D. Kastritsis³. 1. Department of Biology, Shimane University, Matsue, Japan; 2. Department of Genetics, Tokyo Metropolitan University, Tokyo, Japan; 3. Department of Anatomy, Southwestern Medical School, Dallas, Texas. Chromosomal variation and sexual isolation in the *Drosophila nasuta* complex.

The *Drosophila nasuta* complex has a wide distribution in the tropical and subtropical regions, and consists of at least 12 species.

Two groups (the Okinawa-Formosa group and the Hawaii-Samoa group) recognizable by some major morphological characters, were utilized for a study on chromosomal variation and reproductive isolation.

For the study of sexual isolation between groups, the Multiple Choice Method was applied. From the 16 cases studied it became apparent that the Oriental group is completely sexually isolated from the South Pacific group showing an isolation index of 1.00 or nearly 1.00.

In addition this, sexual isolation was studied by calculating the percentage emergence of flies from the eggs oviposited by each cross-mating. In this experiment, complete sexual isolation was also seen between the Hawaiian and the Okinawan strains, showing the percentage of 0.06.

The species belonging to the *nasuta* complex exhibit a very long arm in the salivary gland chromosomes as well as three medium arms and a dot. The salivary gland chromosome complement of the Okinawan strain, however, did not show a dot chromosome in contrast to all other strains