Bochnig, V., H. J. Belitz and H. Nöthel
Institut für Genetik der Freien Universität Berlin. Increase in frequency of a detrimental in a laboratory wild stock.

The Berlin wild-stock of D. melanogaster has been reared in our laboratory for more than 30 years. In 1958 we derived from this stock some sublines which have since been kept in mass cultures. All of them had good viability. At that time we found in one of these sublines 3 out of 21 males tested to have a detrimental in heterozygous condition in the second chromosome. Of these 3 males, 8 balanced stocks (1/Cy) were established, 6 of them behaved as lethals and 2 as semilethals. These 8 factors were allelic. But in the 28 combinations necessary to test the allelism the frequency of surviving compounds varied greatly, and was in most cases higher than expected, even in crosses between lethals. The survivors were entirely sterile, however. As these and further experiments suggest (Belitz, in preparation), the genetical background seems to determine whether the factor in question acts as a lethal or as a semilethal and whether or not the fitness of the heterozygotes is high. Beginning in 1961, fecundity, fertility and longevity in the same subline decreased, giving at last a stock with extreme low viability. A new genetical analysis yielded the following results: 85 males were tested for second-chromosome detrimentals. In 83 males each second chromosome contained a semilethal, in the other 2 one second chromosome had a lethal, the other one a semilethal. These factors, so far tested, proved to be allelic to the detrimentals found in 1958. But the newly isolated homozygous animals are fertile in some cases. Third-chromosome detrimentals were looked for in 57 males, but no one was found.

Krimbas, C. B. College of Agriculture, Greece. Further data on inversion polymorphism of D. subobscura in Greece.

Some data suggested the possibility of seasonal changes in frequencies of structural types of chromosome E in Parnes population (Greece) of D. subobscura (Krimbas, 1964, Evolution-in press). In order to investigate this point it has been decided to study big samples of this population in spring and late summer. An important spring sample (N=216) has been studied by analyzing the males' genotype, crossing them to homozygous females for Standard order in all their chromosomes.

In chromosome A,A2 showed a net increase in frequency compared to the preceeding years. J3+4 was not found this time. The chromosome E frequencies were similar to the late summer ones of last year, in this way disproving a cyclical seasonal change. In chromosome U,UI+2+7 showed a net increase in frequency, while in chromosome 0,0ST decreased.

Chromosomes A2 seem to have size decreasing capacities in regard to AST. Also UI+2+4 seem to be size increasing, while UI+2+7 size decreasing. These differences are still not statistically significant to the 5% level. Only the genotypes for chromosome U showed a net departure from Hardy-Weinberg ($0.01 < P < 0.001$) in having heterozygotes more than expected and less homozygotes. Fitnesses have been estimated (ratio between observed and expected) for the six main genotypes: UI+2/UI+2=0.42,UI+2+4/UI+2+4=0.78,UI+2+7/UI+2+7 = 0.25, UI+2+4/UI+2= I.2I, UI+2+7/UI+2+4 = I.05,MMM UI+2+7/UI+2 =I.46. A fitness surface has been constructed with these values, which showed a maximum at the point UI+2 freq=0.35;UI+2+4 freq=0.40 and UI +2+7 freq=0.25, $\bar{W}$=0.9962. The actual population lies quite near to the maximum (UI+2 freq= 0.32,UI+2+4 freq=0.48,UI+2+7 freq=0.20, $\bar{W}$=0.9929). This shows that our fitness estimates are not very far from reality.

Fujii, S., Kanehisa, T. and Ohnishi, M.
Kobe University, Japan. Biochemical analysis of "Freckled-type melanotic tumor" inducible fraction.

After the co-working of Kanehisa with Prof. Barigozzi and co-workers, Universita Di Milano, the 0.3 M NaCl-eluted fraction which can induce "Freckled-type tumor", from D.E.A.E. cellulose column-chromatography, was tested for the presence of nucleic acids. This fraction has a maximum adsorption at around 280 mμ and minimum at 260 mμ. So far from the fraction from 15 gr. wet weight flies, purified by some organic solvents, DNA or RNA could not be found in this fraction. There is no incorporation of P^{32} in this fraction, though the other two fractions from the chromatography incorporate this isotope.