attention in our work was paid to the scute mutations. Our allelomorph ($scute^2$) affects a great number of bristles, such as : all the 4 scutellars, the praesuturals, postalars anterior and posterior, supraalars ant. and post., sternopleurals - ant. and post., orbitals 1-3, verticals 2, intraocellars, mesosternals, vibrissae, genals, mentals, coxals 1,2,3, costals dorsal proximal, costals 1 and partly sternitals. When compared to the scute allelomorphs of melanogaster the scute of D. hydei is more proximate to the group of scuti longi which reduces the bristles of the B, C and D blocks (see the communications of A. S. Serebrovsky in this issue). It is of interest to note the influence of $scute^2$ upon the bristles of the genitalia, a fact never observed in melanogaster, due probably to a different structure of genitalia.

Serebrovsky, A. S. Further study on scute allelomorphs. A thorough study of a considerably greater number of bristles, controlled by the gene scute, has allowed us to divide all the bristles into four groups (blocks); the A-block, controlled by the achaete allelomorphs, and the B, C and D-blocks, controlled by the scute allelomorphs. Block A: involves the bristles: dorsocentrals, "thoracals", "trapezals", "coslals basal", "antennals external", femorals 3 ventral", interocellars, "antennals basal", subcoxals", microchaete sternopleurals, "ciliars", microgenals", frontocentrals, " femorals I, 2 and 4", "annulars", verticals I. Block B: involves the bristles: notopleurals I, praesuturals, "femorals I 1 and 3", mentals", sternopleurals an. and post., coxals, orbitals, postverticals, ocellars, postalars ant. (?), vibrissae (?), verticals (?). Block C: involves the bristles: scutellars, sternitals, "tergitals", "genitals" (?). Block D: involves the bristles: humerals, postalars post., verticals, supraalars ant. and post., notopleurals - 2. The allelomorphs of scute fall into three groups: scuti brevi, scuti medii and scuti longi. Scuti brevi (sc^5, sc^{4sh}, sc^2) affect in usual laboratory conditions the block C; scuti medii (sc^1, sc^7, sc^9, sc^{B1}, sc^{29}, sc^{2sh}, sc^{17}) the blocks B and C. sc^6, affecting the block B can also be included in the latter group. Scuti longi (sc^{L8}, sc^{s1}, sc^4) affect the block B, C and D. The longest, $scute^3$, affects all the blocks (A, B, C and D) simultaneously, thus including both scute and achaete. Finally sc^{A1} links scute and achaete, affecting the block A and B, as well as $sc^{13}(sc^1 / ac^3)$. To judge from the data of Pogossianz, Varshaver and Serebrovskaja analogous types of allelomorphs exist in D. virilis, simulans and hydei.

Shapiro, N. I. The rate of spontaneous sterile mutation. The frequency of sterile mutants, functioning in females, was studied. Recessive steriles, arising in the 2nd chromosome, were registered. The method used in the experiment prevented from mixing the newly arisen steriles with those which had been previously in the population. Among 3,841 chromosomes studied, one sterile was detected. In the same experiment 18 newly arisen lethals were detected among 3,132 chromosomes. The data obtained indicate a considerably lower frequency of spontaneous autosomal sterile mutation as compared to the lethal mutation rate.

Steinberg, Arthur G. Growth curve of Bar and wild type eye discs. Using the technique described by Medvedev the growth curves for Bar and wild type eye discs were measured. Measurements were then taken at twelve hour intervals from thirty-six hours after hatching until puparium formation. The experiments were run at $27 \pm 1^{\circ}$ C.

The data show that the Bar eye discs are already smaller than wild at 36 hours after hatching and that the growth rate of both Bar and wild type is the same throughout this period of development. These data are especially interesting in view of the fact that the temperature-effective period is included in this time interval.

Steinberg, Arthur G. The Lobe alleles and the v+ hormone. Implantation of eye discs from larvae which are genotypically Lobe, Lobe^2, Lobe^4 or Lobe^5 into vermilion hosts shows that such discs fail to develop wild type pigmentation. Their pigmentation is intermediate between that of vermilion and wild type. This reaction is similar to that shown by the Bar "alleles".

Steinberg, Arthur G. Facet number of Bar^4 The facet number of B^4 ♂♂ and ♀♀ at 25° C has been determined. The ♂♂ have 560.0 facets and the ♀♀ 558.2.

Timofeeff-Ressovsky, N. W. Determination of the "radius of activity" of Drosophila flies. For many theoretical considerations the knowledge of the real amount of panmixy or, vice-versa, of isolation within the species-populations is rather important. Without considering some finer mechanisms of physiological and ecological isolation, three main factors are of importance in this connection: (1) the real distribution of individuals over larger areas within the different parts of the species-population, (2) the "radious of activity" of the individuals within one generations, and (3) the extension of "life-waves" (quantitative fluctuations in time and space) in populations, and of accidental, passive mechanisms of mixture between different parts of a larger population. The relation of the first two factors can show the amount of "active" panmixy, and the knowledge of the third factor can give an idea of the amount of "passive" panmixy. More or less systematical, extensive, and exact studies on the "radius of activity" were so far made only in birds; they showed tremendous dissipation of the brood in each generation in some species (e.g. Nettion crecca L.), and extraordinary territorial conservatism in others (e.g. Sturnus vulgaris L.). The following simple method can be used in studying the "radius of activity" in Drosophila: A ground of the size of about 2 - 5 hectars is divided into equal squares (on the map!) and in the center of each square (10 - 15 m apart) a bottle with food is placed; in the middle of the ground larger amounts of food are placed, and 2000 - 5000 Drosophila flies with different (not too deleterious!) mutations (better - combinations of 2 - 3 mutations) as "markers" are let out. During a period of 15 days the food bottles are inspected twice a day (9^h and 18^h), and the "marked" flies are counted, registered, and let out at the same place where they were caught (or collcted and killed!). The end-result of a 15 days experiment will show the "dissipation-area", or "radius of activity" of the individuals of one generation of the species in question. Such tests have as far shown that the diameter of the area where "marked" flies are caught (after they were let out in the center of this area) is about 100 - 200 m, differing according to the species and mutations used, and also to the meteorological conditions. D. funebris shows, so far, a higher "dissipation" than melanogaster. The same type of experiment can be modified: instead of imago-flies, "marked" larvae and pupae can be placed (with a supply of food) in the center of the "experimental field".