intermediate with respect to the virilis ♂ implant, matches that of the ♂ implants of the other species. In further experiments, darker allelmorphs of v^3 are being used.

Just G. and Steiniger, F. Natural selection in D. melanogaster (normal-winged and vestigial) on the isle Greifswalder Oie.

In the spring of 1935 an investigation was entered on the isle cited to determine the value of selection under natural isle conditions in vestigial and normal-winged D. melanogaster, both put out experimentally on the isle. The investigation was continued in 1936 and will be also continued in 1937.

Lapedies, Daniel L. The effect of ci^D upon the facet number of Bar eye in D. melanogaster.

Isogenic Bar females were mated with bt^D/ci^D males at 25° C. In the F_1 the facet numbers of the males were counted with a net micrometer. The facet numbers of 48 F_1 B; $ci^D/$ males = 48.0 ± 1.4, the facet number of 57 F_1 B; $bt^D/$ ♂ males = 58.87 ± 1.8. The size of the F_1 female eye made facet counts impractical. While the B/♂; bt^D/♂ female eye was similar to the heterozygote B/♂ female eye in shape and size, and B/♂; ci^D/♂ female eye, due to a loss of facets along the entire anterior edge of the eye, was smaller and exhibited a different shape that showed little variation.

Neuhaus, M. Sterility mutations in D. melanogaster.

In order to detect genes in the X-chromosome, nonhomologous to bobbed but homologous to the Y, the following experiment was undertaken: yellow males were X-rayed (dosage about 5000 r) and crossed to $\underline{Cl}B/w^e bb^1$. Bar females from F_1 were mated with $w^e bb^1$ males. Mutations homologous to bobbed and those arising in the active part of the X were obtained in F_2. Non-Bar females from F_2 were crossed to their brothers and if recessive mutations, having homologous in the Y arose in the X, then in F_3 it would be possible to obtain females showing the same mutations. Among 1136 chromosomes examined the above mutations did not occur but at the same time it was found that in some bottles (10%) of F_2 all males carrying the irradiated X-chromosome were sterile. This fact being established those males' sisters were crossed to y. v f B males, all sons from F_3 having been tested on sterility. The following table shows a part of the results obtained:

Stock number	Fertile males		Sterile males		
	y	w^e	y	w^e	y w^e
No. 6	3	1	6	8	-
No. 15	4	4	5	2	-
No. 7	4	5	7	5	1
No. 19	-	11	6	4	-
No. 20	5	8	7	9	1
No. 18	3	7	9	5	-
No. 23	1	6	6	2	-
No. 21	3	1	7	1	-
No. 4	1	4	10	5	-
No. 8	3	6	5	3	-
No. 13	3	17	20	2	-
No. 22	3	6	4	4	-
No. 2	-	11	7	-	-

The above data allow us to conclude that under the influence of X-rays sterility mutations scattered along the whole length of the X-chromosome may arise.

Spencer, W. P. Life history and control of laboratory mites. See DIS-6:67-68. The following observations on the life history of the parasitic laboratory mite are of interest in connection with the problem of control. On Sept. 16 one D. repleta carrying a single individual of the parasitic mite was placed in a shell vial with banana agar culture medium. By Sept. 24 the mite, fully grown, was crawling in the culture medium. By Sept. 25 a number of young mites were seen in the culture thus indicating that the mite reproduces parthenogeneically (mating of the immature parasitic stage has never been observed and probably does not occur). On Sept. 26 there were about 100 young mites in the culture vial. These moved rather rapidly over the surface of the culture medium or slowly if the legs became immersed in it. There was no tendency for these mites to wander far from the surface of the culture up the sides of the vial. On Sept. 27 these mites had grown to a size larger than the migratory stage and one pair was observed mating. On Sept. 28 several mating pairs were present and a single specimen of the migratory stage was seen. These observations indicate a life cycle in which parthenogenesis produces both males and females. Thus a culture or a laboratory may become infected from a single mite of the immature migratory or parasitic stage.

Sources of infection. A laboratory entirely free of parasitic mites may become infected from the following sources:

(a) Cultures received from other laboratories. Often only a few mites will be present in such cultures when first received and will not be detected. Always assume that they are present.