Hadorn, Ernst. Pseudopupae. This term is suggested to be used for all cases where only a more or less normal puparium is formed within which no development of the imaginal discs occurs. Such pseudopupae are for instance formed by "lethal-giant" larvae and by hybrid males of D. melanogaster and D. simulans. Formation of pseudopupae in normals can be experimentally induced by injecting mature "ring-glands" into immature larvae. Pseudopupae may vary in their form. The best developed ones are like normal pupal cases, the poorest show only a hardening and darkening of the larval skin.

Hollander, W. F. Bithorax alleles. The mutants bx^W and bx^D were both discovered in one female. Nothing like bithorax had ever been observed in the stocks before. Other bithorax stocks were obtained from Cold Spring Harbor, namely those containing bx, bx^{34e}, and bx^d. The following phenotypes were obtained in the various hybrids:

bx/bx^{34e} = nearly wild type, slight development of metathorax.
bx/bx^d = wild type.
bx/bx^W = nearly wild type, but some overdevelopment of methathorax, often asymmetrical.
bx/bx^D = same as bx^D alone.
bx^{34e}/bx^d = wild type.
bx^{34e}/bx^W = blend
bx^{34e}/bx^D = rounded, flat, wing-like halteres, but not very large. Otherwise wild type.
bx^W/bx^d = wild type
bx^W/bx^D = oval, flat, winglike halteres, fairly large; little if any metathoacic development; flight not vigorous, but possible.
bx^d/bx^D = same phenotype as bx^d homozygous.

From the above results, I have concluded that these five factors are alleles, with no seriation of effect. No attempts have been made to analyze the salivary gland chromosomes.

Just, G. and F. Steiniger. Natural selection in D. melanogaster (normal-winged and vestigal) on the isle Greifswalder Oie. The investigations on selection under natural isle conditions (DIS-7, p.91) are continued on the isle Greifswalder Oie. They were also begun in the part Gellen of the isle Hiddensee.

Kaliss, Nathan. Determination of the color of malpighian tubules in larvae. Poulson has shown that the pigment of the malpighian tubules appears in zygotes that are 20 hours old. With a magnification of 440x, the color can be seen to be due to the presence of discrete yellow spherical particles located in the walls of the tubules. With a magnification of 1500x

it was determined that the absence of color in genetically white first instar larvae is due to the absence of granules, either yellow or white, from the walls of the malpighian tubules. These observations were made on larvae dissected in Ringers' solution.

Kaliss, Nathan. The larval expression of the gene for yellow. While observing male zygotes, 24 hours or older, that were deficient for the loci yellow and achaete, it was noticed that the mouth armature was yellow, as distinguished from the pale gray or black mouth parts of non-deficient wild-type eggs. Examination of genetically yellow late zygotes and first, second, and third instar larvae showed that the mouth armature was brown-yellow as contrasted with the black of non-yellow animals. The color darkens progressively with age.

The accuracy of this distinction was tested in the following manner:

1. From the cross y w/♀ x +/♂, 40 first instar larvae were selected as phenotypically wild-type by their mouth parts. From these larvae 39 adults were recovered: 25 +♀♀, and 14 +♂♂. From the same cross 39 first instar siblings were selected as having yellow mouth parts. From these larvae 38 imagoes, all yellow white males, were recovered.

2. From the cross w/In-49, y Hw♀ x +/♂ 19 second instar larvae were selected as yellow. These were recovered as 19 In-49, y Hw males.

3. A large number of 3rd instar larvae from the crosses (y ac)-B/In-49, y Hw♀ x +/♂, and w/In-49, y Hw♀ x w♂ were put on a slab of food. After they had worked through the food for half and hour, and presumably had become thoroughly mixed, 15 non-yellow and 15 yellow larvae were segregated. From the 15 non-yellow larvae, the following 15 imagoes were recovered: 4 wild-type ♀; 5 white ♀; 6 white ♂. From the 15 yellow larvae, 14 imagoes were recovered: 3 In-49, y Hw♀; 3 y Hw B♀; 8 In-49, y Hw♂.

It is interesting to note that Muller's classification of the mutation yellow as hypomorph is borne out by the appearance of the mouth armature in the hemizygous eggs deficient for the loci yellow and achaete. In these zygotes the armature is yellow. Miss Katherine B. Brehme has independently discovered the larval expression of the yellow locus while working on attached-X yellow larvae.

Komai, T. Collection of D. simulans from Japan. In December 1936, D. simulans has been collected by Mr. K. Daido from Titizima and Hahazima of Ogasawara Islands (Long. 142° E.; Lat. 26-28° N.). This may be the first record of capture of this species from Asia.