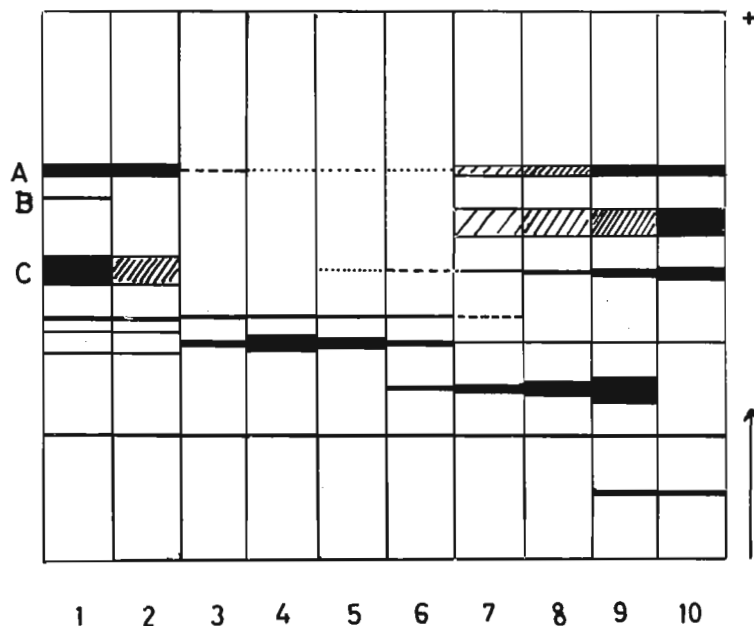


Nilsson, L. R. University of Uppsala, Sweden. On the ontogeny of alkaline phosphatases in *D. m.*

phatase-patterns were developed with alpha-naphtylphosphate and Fast Garnet GBC salt in boric acid buffer at pH 7.8. Two larval stages ( $48 \pm 3$  hrs. and  $72 \pm 3$  hrs.), five pupal stages (0 - 3,  $12 \pm 3$ ,  $36 \pm 3$ ,  $60 \pm 3$  and  $84 \pm 3$ ) and imagoes of two ages (0 - 3 and  $24 \pm 3$  hrs.) were studied. Patterns specific to the stage of development were found in all stages studied. Among the strains the two genetic variations described by others were present. The inter-strain variation of alkaline phosphatase-bands was greater than in the other stages of development, AE showed four bands while AT had nine bands. All strains, except A-KAS and KAS which had identical patterns, varied with respect to time and disappearance of the strong band in the second larval stage. Differences of activities of certain pupal stages were also noticed between the strains.

Adult flies 0 - 3 hrs. old showed the unaltered pattern of the final pupal stage. In flies  $24 \pm 3$  hrs old a new pattern appears. These new alkaline phosphatases are of abdominal origin but not connected with the gonads. In the strain Be there is a difference in patterns of males and females. Females have a faint band B, absent in males. Females also have a higher activity of band C. In males this band is not so highly stained. The other strains showed the same change of the adult pattern, but had no "sex-difference" in their alkaline phosphatases.

Figure: The patterns of alkaline phosphatases of the strain Be. 1. Adult female 24 hrs. 2. Adult male 24 hrs. 3. Adults of both sexes 0 - 3 hrs. 4. Pupae 84 hrs. 5. Pupae 60 hrs. 6. Pupae 36 hrs. 7. Pupae 12 hrs. 8. Pupae 3 hrs. 9. Larvae 72 hrs. 10. Larvae 48 hrs.



Giesel, Betty Jean. University of Oregon, Eugene, Oregon. Ring loss in  $X^{C2} In(1)w^{vc}$ ,  $w^{vc} f$  at two temperatures.

Females from  $X^{C2} In(1)w^{vc}$ ,  $w^{vc} f/y w^{m4}/Y$  stocks which have been selected for several years for high production of gynandromorphs were crossed individually to  $y w^{m4}$  sib males. Most individuals

carried extra Y chromosomes. Flies were raised at room temperature and  $25^{\circ}C$ . Several generations (6 at  $25^{\circ}C$  and 5 at room temperature) of single female matings were made.

Gynandromorphs were scored for male tissue in two areas of the body, left front metatarsal segment (sex comb) and the more posterior tergites on the right side. The total numbers of gynandromorphs and apparently perfect females were also noted.

In the flies raised at  $25^{\circ}C$ , an average of 50.7% of the tissue of a gynandromorph is apparently male, and 47.1% in flies raised at room temperature. This suggests that  $X^{C2} In(1)w^{vc}$  is lost almost exclusively at the first cleavage division.

The number of gynandromorphs in both cases almost exactly equals the number of females. At  $25^{\circ}C$ , 49.9%, and at room temperature, 49.1% of the presumptive females in fact became gynandromorphs due to ring chromosome loss. Thus,  $X^{C2} In(1)w^{vc}$  loss may be due to some regular process.