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If we follow the method of synchronization of Stocker and Jackson (this issue), we find that *Drosophila pseudoobscura* larvae (stock from Mather, California) go through their first and second molt about 24 and 72 hours after oviposition, while spiracle eversion occurs (on the average) at 165 hours after oviposition.

Samples of different ages were collected and homogenized according to the method of Johnson (1966). We used 500 eggs or first-instar larvae, 100 second-instar larvae, 30 early third-instar larvae, 20 medium third-instar larvae, 10 late third-instar larvae, prepupae or pupae, 15 24-hour, 7-day or 25-day old adults. These were homogenized in 15 μ l of deionized water in each case. We employed 7% separating acrylamide gels, and used a Canalco Model 1200 disc electrophoresis apparatus. The procedure was carried out in the cold with a buffer of pH = 9.5 at a constant current (4mA per tube) and until the tracking-dye (Bromophenol blue) reached 1 cm from the lower end of the tube. The gels were stained in 7% aniline-blue black for 90 to 120 mn and destained in 7% acetic acid in a Canalco quick gel destainer. Split gels were also used to allow better comparisons between stages as described by Spiegel et al. (1970).

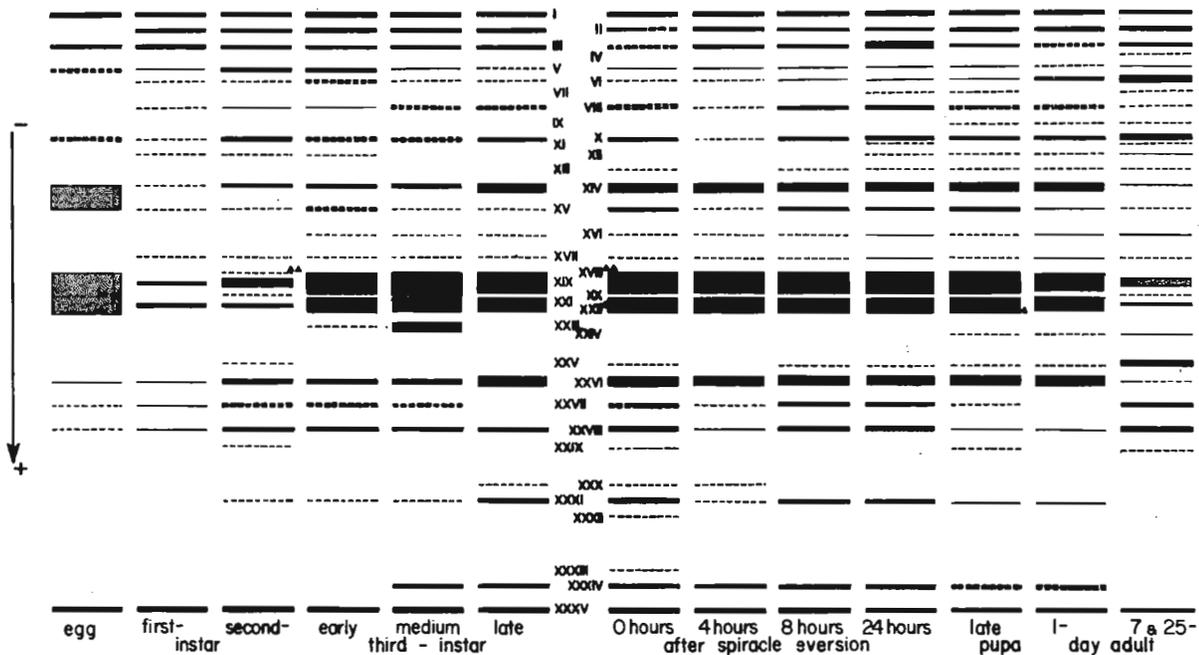


Figure 1. Summary of results concerning the general protein patterns of various developmental stages of *Drosophila pseudoobscura*. Interrupted thin or thick bands = bands not found in all electrophoretic runs of a particular stage. Stippled bands = diffuse bands. Dark bands of various thickness = bands present in all samples. Roman numerals = band number. XVIII $\blacktriangle\blacktriangle$ and XXII \blacktriangle refer to the bands bearing two or one triangles.

A total of 35 bands can be identified from one stage or the other. Among these bands about one-half do not show any change (quantitative or qualitative) regardless of developmental stage. The others show either qualitative or quantitative changes (bands XXIII and XIX or XXI respectively are characteristic).

References: Johnson, F.M., 1966 D.I.S. 41: 193-194; Spiegel, M., E.S. Spiegel and P.S. Meltzer, 1970 Develop. Biol. 21: 73-85.