Perez Alonso, M. and R. de Frutos. University of Valencia, Spain. Electron microscopic analysis of the E polytene chromosome of **Drosophila subobscura.** Division 54.

The ultrastructure of the proximal regions of **Drosophila subobscura** E polytene chromosome has been analyzed under the electron microscope. We have followed the squash thin sectioning technique developed by Sorsa for **Drosophila melanogaster** (Sorsa 1983). Salivary glands from third instar larvae were fixed in acetic methanol. The slides were stained in heamalum Mayer for 10 min in order to select the chromosomes with the light microscope (Berendes 1968). After separating the polymerized material from the slide, the chromosomes were identified under the light microscope. The squash was cut into small pieces and each one adhered to a Durcupan block with a cyanocrylic glue. Thin sections of about 90-120 nm thickness were collected on 200 mesh copper grids. The grids were observed in a JEOL JEM-100 S electron microscope at initial magnifications from x2.000 to 5.000.

Figure 1 presents division 54 of the E chromosome of **D.subobscura** following the map of Kunze-Muehl (Kunze-Muehl & Mueller 1958). The centromere is at the tip of this chromosome so that the 54 region may be affected by the Beta-heterochromatin (Beerman 1972). This is why the banding pattern of the proximal part of this division is difficult to define and many more photographs will be necessary to make a detailed amp.

In a first approximation, the electron microscope seems to resolve some extra bands which cannot be seen with the light microscope. This agrees with the findings of Sorsa on **Drosophila melanogaster** (see, for example, Sorsa et al. 1984). Possible new bands are indicated by arrow heads. The asterisk indicates two bands which had been defined as a single one in the original light microscopic map.

References: Beerman, W. 1972, in: Results and Problems in Cell Diff. (Springer-Verlag):1; Berendes, H.D. 1968, DIS 43:115; Kunze-Muehl, E. & E. Mueller 1958, Chromosoma 9:559; Sorsa, V. 1983, Cell Differ. 12:137; Sorsa, V. et al. 1984, Chromosoma 90:177.

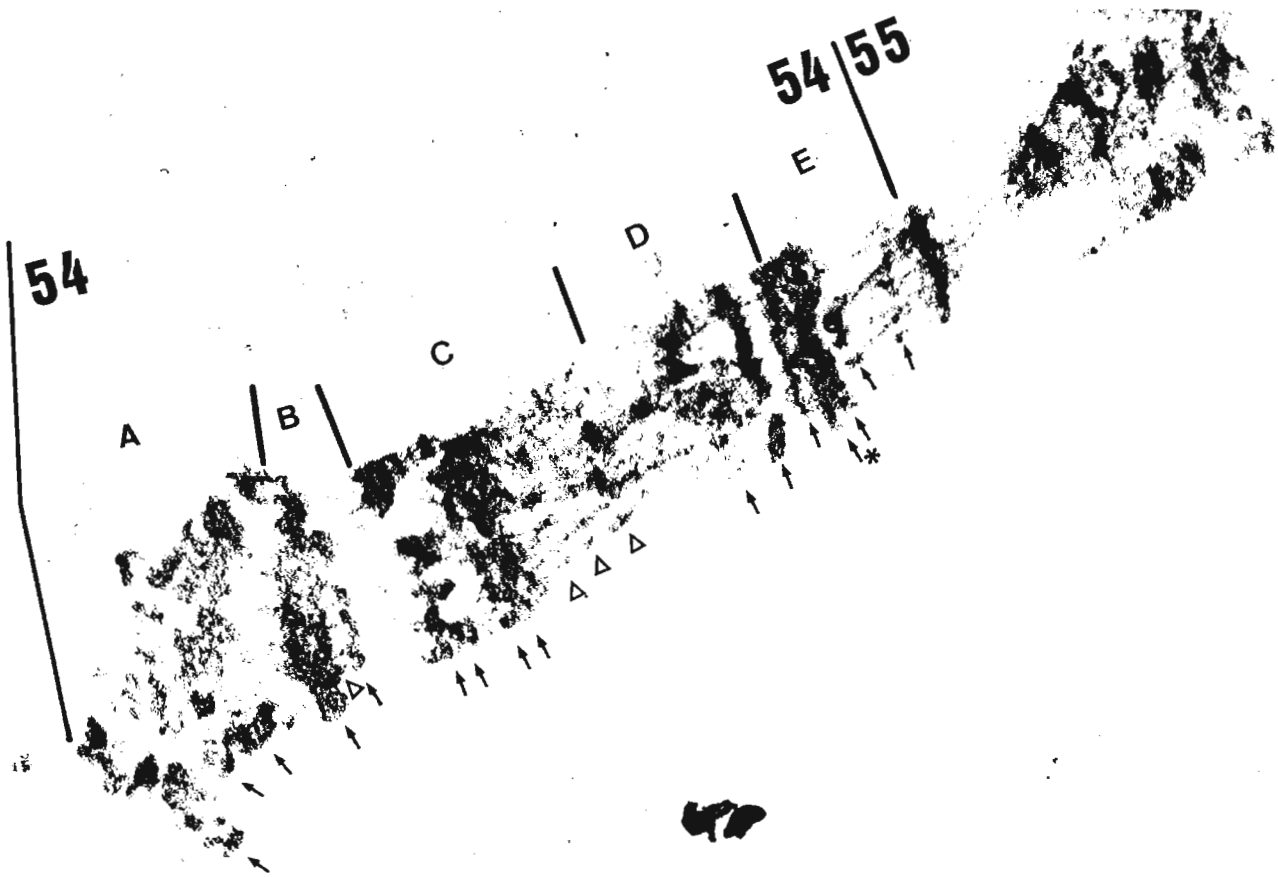

Figure 1. Division 54 of the E chromosome. The centromere is at the left. Magnif. ca. x15,000.