days and reared at 18°C. Larvae that appeared 9-10 days after egg-laying were discarded. The genotype of these larvae was either $gt^1/FM6$, FM6/FM6, or FM6/Y. The desired gt^1/gt^{X11} third instar larvae climb the walls of the food bottle 15-17 days after egg-laying.

A rich food medium was used for rearing flies and larvae which was either sugar-based or starch-based. The sugar medium contained 10% (w/v) anhydrous dextrose (J.T. Baker Chemical Co.), while the starch food contained 5% (w/v) cornstarch (ICN Pharmaceuticals, Inc.). Both media also contained 15% (w/v) Brewer's yeast, 1.2% (w/v) agar, and 1 part buffered propionic acid (Lewis 1960) plus 5,000 Units each of penicillin-streptomycin (Grand Islands) for every 100 parts of food medium.

Chromosome preparations from the anterior and posterior midgut regions of single gt^1/gt^{X11} third instar larvae were prepared for examination with the light microscope and compared with salivary gland preparations. Larvae were dissected in Drosophila Ringer's solution and the tissue was fixed immediately for three minutes in 3:1 ethanol:glacial acetic acid. After transferring the tissue to 45% glacial acetic acid for one minute, midgut preparations were stained for 2-1/2 minutes in 2% lacto-aceto-orcein while the staining time for salivary glands was 1-1/2 minutes. Chromosomes were spread in the usual manner.

While either of the above approaches was satisfactory for banding and puffing analysis of midgut polytene chromosomes, the genetic approach proved the least time consuming. It may be assumed that the combined application of both approaches to "small" polytene chromosomes would improve the resolution of banding patterns beyond that observed by using either approach alone.

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References: Ephrussi, B. and G.W. Beadle 1936, Am. Nat. 70:218; Kaufman, T.C. 1972, Genetics 71:s28; Lewis, E.B. 1960, DIS 34:117; Mitchell, H.K. and L.S. Lipps 1975, Biochem. Genet. 13:585.

Shearn, A. Johns Hopkins University, Baltimore, Maryland. Reintroduction of y^+ onto a TM3 chromosome.

Some time ago, I planned an experiment which depended on using the y^+ marker which is supposed to be on TM3 balancer chromosomes. However, none of the TM3 chromosomes tested had y^+. Therefore, I set out to reintroduce it onto a TM3 which carried Sb and Ser. Females with the genotype $y;Dp(1;3)sc^{J4},y^+$ / y;TM, ri pP sep bx^{34e} Sb e^s Ser were treated with 4000r of γ-irradiation and mated to $y;+/_{\neg}$ + males. Progeny which were y^+, Sb and Ser were selected and tested further. In this way we recovered several TM3 chromosomes containing y^+. They are reasonably stable because the unirradiated recombination frequency of y^+ with TM3 is 0.000. A stock with such a y^+ containing TM3 chromosome is available for distribution (see stocklist, DIS 54).