

Table 1. Classification of red-eyed males in the 1 mM MMS treatment series (3069 y ac males counted).

	Minute complete	Minute mosaic	Minute <sup>+</sup>	Total
red eye complete	2	4	1	7
red eye mosaic	-	18	8	26
Total	2	22	9	33 (1.1%)

In the control series, 1283 y ac males were counted, all of which had zeste eyes. In the MMS treated series 3069 y ac males were scored. The results (Table 1) show that in this group a sizeable number of red-eyed males was observed, most of which showed a Minute phenotype as well. Interestingly, the majority were mosaics, having only one red eye or red sectors in one or both eyes, the Minute phenotype often being expressed only by the missing of verticals or arista. 29 Retests were fertile. Of these, only 2

showed transmission of the red-eyed and Minute phenotypes. Among these was one of the two flies showing the complete phenotype for both red-eye and Minute. The other one was mosaic for both eye colour and Minute. The preponderance of mosaics among MMS-induced mutations is in accordance with data of Lee (1976) on mosaics among induced visibles and with the ratio of mosaic versus complete recessive lethals being relatively high for MMS (Vogel & Natarajan 1979).

The frequency of induced Minutes is quite similar to the rates found by Huang (1977) with MMS at a recessive lethal induction of 16-22%. (This author does not mention the occurrence of mosaics). If the number of Minute loci on chromosomes 2 and 3 is taken as 30-40 (Huang 1977) and the number of loci on the X-chromosome mutable to recessive lethal as 800 (Abrahamson et al. 1980), our figures for induced Minutes (1.1% for all red-eyed males, 0.8% for the red-eyed males also showing Minute) and the simultaneously obtained recessive lethal frequency of 21.4% are not far apart on a per locus basis. This would suggest that indeed most induced Minutes act as suppressors of zeste and can be scored as eye-colour changes.

In conclusion, the principle of scoring Minute mutations by the more objective criterion of the eye-colour change appears to work. However, in our experience the test is not likely to take less time than the regular sex-linked recessive lethal test. This applies also when large sample sizes are needed for the detection of weak mutagens. Moreover, performing a brood pattern analysis with individual pairings would be more cumbersome because the numbers of treated males have to be considerably larger than in the case of the recessive lethal test.

References: Abrahamson, S. et al. 1980, *Envir.Mutag.* 2:447-453; Huang, S.L. 1977, *Mutation Res.* 44:145-148; Lee, W.R. 1976, in: M.Ashburner & E.Novitski, eds, *The Genetics and Biology of Drosophila melanogaster*, V.1c:1299-1341; Persson, K. 1976, *Hereditas* 82:111-120; Vogel, E. & A.T.Natarajan 1979, *Mutation Res.* 62:51-100.

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One male of *Drosophila subsilvestris* was captured in Karpenissi on June 18, 1981, in a collection of 1199 *Drosophila* flies. It is the first time *subsilvestris* is recorded in Greece. The male was identified by crosses

with virgin females of other European *obscura* group species: it produced repeatedly offspring only with *subsilvestris* virgin females. The other flies of this collection were 1169 *D.subobscura*, 17 *D.obscura*, 1 *D.ambigua*, 1 *D.helvetica*, 3 *D.immigrans* and 8 *D.cameraria*. Until now 23 species of *Drosophila* have been recorded from Greece.

