Mather, W.B. and K.S. Tam. University of Queensland, Brisbane, Australia. Inversions from Chiang Mai, Thailand. 3rd Report.

TABLE

Inversion	Chromosome	Simple	Complex	Het. Freq. %
A_5	II L	X		30.2
E	II L	X		22.2
C_5	II R	X		11.1
B_5	III	X		12.7
C_1	III	X		3.2
D_5	II L		X	1.6

In July 1983 sixty-three isolines of **D.s.albostrigata** and six isolines of **D.albomicans** were established from Chiang Mai, Thailand. Inversions in these species were last reported on from Chiang Mai in November 1982 (Mather & Pope, DIS 60:141).

(a) D.s.albostrigata. Five simple and one complex inversion were detected. All inversions had previously been detected in Southeast Asia but D_5 was new to Chiang Mai. Heterozygosity frequency of all inversions detected is given in the Table.

(b) D.albomicans. One simple and one complex inversion were detected. E' (simple) had previously been detected from Chiang Mai but J_8 (complex) although recorded from South East Asia was new to Chiang Mai.

The material was collected and the isolines established by W.B.M. The laboratory work was carried out by K.S.T.

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Table 1.

Inversion	Chromosome	Simple	Complex	Het.Freq.%
A_3	I	X		3.6
G	I	X		7.1
A_5	II L	X		71.4
E	II L	X		28.6
D_5	II L		X	17.9
C_5	II R	X		7.1
D_3	II R	X		3.6
B_5	III	X		25.0
C_1	III	X		3.6

In November 1983 twenty-eight isolines of **D.s.albostrigata** and one isoline of **D.albomicans** were established from Chiang Mai, Thailand. Inversions in these species were last reported on from Chiang Mai in July 1983 (Mather & Tam, DIS 61: this issue).

(a) **D.s.albostrigata.** Eight simple and one complex inversion were detected. All inversions had previously been detected in Southeast Asia, but D_3, G, and A_5 were new to Chiang Mai. The heterozygosity frequency of all inversions detected is given in the Table.

(b) **D.albomicans.** One simple inversion was detected (inversion E^1). This had previously been detected from Chiang Mai.

The material was collected and the isoline established by W.B.M. The laboratory work was carried out by K.S.T.

Matyunina, L.V. and T.I. Gerasimova. Inst. of General Genetics, USSR Academy of Sciences, 117908 Moscow, USSR. Study of spontaneous sex-linked lethal mutations in the unstable line ct^{MR2} of **Drosophila melanogaster.**

Earlier an unstable ct^{MR2} mutation was obtained at the locus cut (20.0; 7B 3-4) under conditions of P-M hybrid dysgenesis (Gerasimova 1981). This mutation is induced by a mobile dispersed gene MDG4 (Gerasimova 1984a). This line homozygous for X-chromosome is characterized by a high reversion frequency, segregation of novel ct mutations with a new phenotype and superunstable ct mutations, as well as by the formation of new visible mutations for other loci of the X-chromosome (Gerasimova 1981).

Phenotypical changes arising in the $ct^{MR}2$ line are the markers of so-called transpositional bursts, i.e., mass simultaneous transpositions of different mobile elements in the same germ cell (Gerasimova 1984b). The frequency of transpositional bursts in the ct^{MR2} line was about $1x10^{-3}$. Since transpositional bursts result in active insertion mutagenesis, the true frequency of "bursts" may be significantly higher because in this case lethal mutations should occur. Therefore the objective of the present work is the estimation of the lethal mutation frequency in the X-chromosome of the ct^{MR2} line and characterization of the distribution of the lethals.