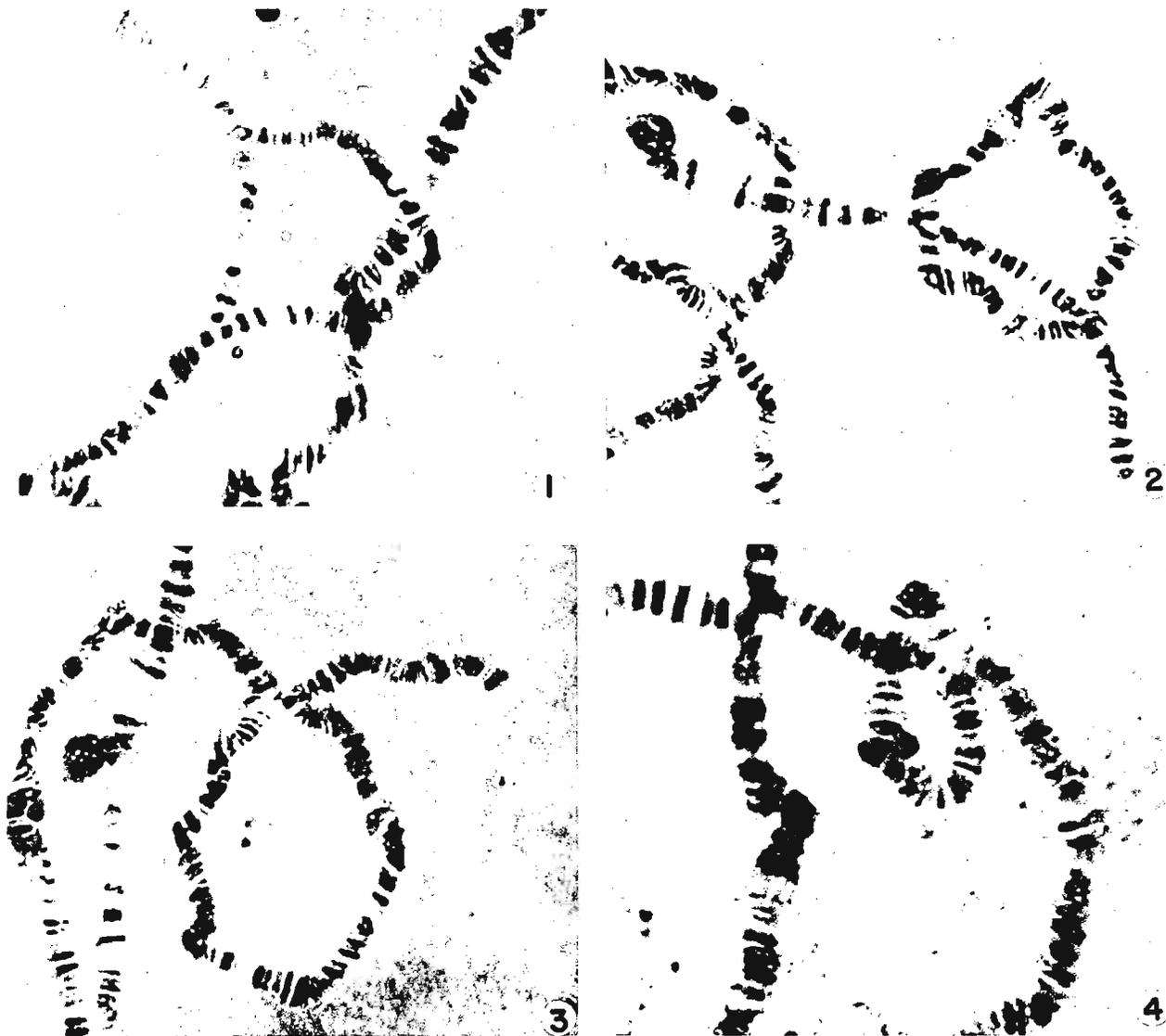


Nirmala Sajjan, S. and N.B. Krishnamurthy
University of Mysore, Manasagangotri,
India. Chromosomal polymorphism in
Drosophila neonasuta.

Drosophila neonasuta which exists sympatrically with *D. nasuta*, is less polymorphic than the latter with regard to gene arrangements. The population studies of *D. neonasuta* from five different places (Mysore, Channapatna, Chitradurga, Krishnarajasagar and Chikmagalur) have

revealed one duplication (Fig. 1), 3 inversions (Figs. 2, 3 and 4) and one translocation (Fig. 5). The distribution and the frequencies of these gene arrangements are shown in the



Chromosome polymorphism in *Drosophila neonasuta*: Fig. 1. Duplication in Chromosome 3; Fig. 2. Inversion 2LA; Fig. 3. Inversion 2RA; Fig. 4. Inversion 3A.

Tables 1 and 2. The heterozygous duplication of the order of about 18 bands in the third chromosome is found in Bababudangiri population. As it is found only once, it is difficult to attribute any evolutionary significance. The three inversions, 2LA, 2RA and 3A are of paracentric type. 2LA and 2RA are found in all populations studied and thus widespread in their occurrence, while the inversion 3A is found only in Channapatna and Mysore and thus limited in its distribution. Further the fact that 2LA and 2RA coexist more frequently than independently, suggests that the adaptive feature or the influence of this complex supercedes the in-

fluence of either inversions on carriers. Translocations are reported sporadically for a few species of *Drosophila*. A translocation for the first time in *D. neonasuta* is reported here. It is reciprocal heterozygous translocation involving the third chromosome and the right arm of the second chromosome and named as (2R-3)A. As it occurs in very low frequency of 1%, it is quite safe to say that it may not have any evolutionary significance.

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Fig. 5. Translocation (2R-3)A in *D. neonasuta*

Table 1. Percents of gene arrangements of *D. neonasuta* from five different populations of Mysore State

Population	Second chromosome		Third chromosome	Translocation	Duplication
	2LA	2RA	3A		
Chitradurga	67	67	-	-	-
Channapatna	23	23	24	-	-
Bababudangiri Hills	38	40	-	1 (2R-3)A	1
Krishnaraja sagar	20	21	-	-	-
Mysore	14	15	26	-	-

Table 2. Percents of single, double and multiple heterozygotes for gene arrangements in *D. neonasuta*

Population	2LA	2RA	3A	2LA & 2RA	2LA,2RA & 3A	Translocation	Duplication
Chitradurga	8	8	-	59	-	-	-
Channapatna	-	-	22	21	2	-	-
Bababudangiri Hills	1	3	-	37	-	1	1
Krishnaraja sagar	-	2	-	40	-	-	-
Mysore	-	1	15	3	11	-	-