Grace, D. University of Oregon, Eugene. The Ubx/bx transvection effect in the entire compound chromosome C(2;3)EN.

In Ubx/bx flies, the phenotype is enhanced when one of the chromosomes is involved in a rearrangement which has a break in 3R between the locus of bx and the centromere (the transvection effect, Lewis 1954). In the entire compounds now available, the 3L arm is placed between the locus of bx and the centromere (composition: 3R3L·2L2R), and it is of interest to know whether breaks in 3R under these conditions can also exaggerate the Ubx/bx phenotype.

Series	Progeny	Exceptions	Transmitted	% tr.	0	4
A	1718	37 (2.2%)	11	29.7	11	0
B	1638	34 (2.1%)	9	26.4	7	2
C	1878	28 (1.5%)	15	53.5	14	1
D	1545	20 (1.3%)	8	40.0	7	1
E	1189	32 (2.7%)	11	34.4	11	0
F	1783	41 (2.3%)	27	51.2	21	0
G	1052	19 (1.8%)	4	21.1	4	0
H	1642	26 (1.6%)	10	38.5	8	2
I	2241	39 (1.7%)	18	46.2	16	2
J	1107	21 (1.9%)	7	33.3	7	0
K	3322	33 (1.0%)	12	36.4	11	1

Flies carrying C(2;3)EN, Ubx chromosomes were irradiated with 3000 r and mated to flies with normal metacentric third chromosomes carrying bx^{34e}. Following the numerical scale of 0-4, most of the progeny had a transvection score of 3; the exceptions fall into two distinct categories, those with a score of 0 or a weak 1 and those with a score greater than 3.

The table is a summary of the data. Over 90% have a score of 0. Since they occurred singly, in most cases, and in subsequent crosses appear to be the result of changes on the third chromosome, it seems likely that these represent induced changes of some sort. Some other exceptions also enhance or reduce the haltere effect. Mosaic and complete somatic and gonadal mutants were observed. Cytological analysis of these exceptions will be undertaken.

Gromko, M.H. Bowling Green State University, Bowling Green, Ohio. An attempt to reduce population size through extensive trapping.

Only one attempt to manipulate a local population of Drosophila through extensive trapping is reported in the literature (Dobzhansky and Wright 1943). One possible reason for the failure of extensive trapping to reduce population size in that experiment is that adults may have been immigrating to the study area from the large continuously wooded surrounding area. Drosophila have been demonstrated to show bait-directed movement (Johnston and Heed 1975) and to be capable of long distance migration. Here I report an attempt to reduce population size of D. affinis in an isolated woodlot. Although migration from other woodlots is not impossible, the frequency of such events is limited by the woodlot's island nature.

The study area, Carter Woods (Wood County, Ohio), is a small (6.3 acre) woodlot dominated by oak and hickory. It is surrounded by fields usually planted in corn. The nearest neighboring woodlot is 1.5 km distant, with no fence rows or migratory corridors of any kind between.

Sixty-four baits (old banana and yeast) were placed in the woodlot at 15.2 m (50 ft) intervals in a rectangular grid. The bait-grid was situated centrally, and occupied approximately 60% of the total wooded area. Collections were made in all activity periods in which it was not raining, and were carried out over a period of 18 consecutive days in August, 1979. Temperature, humidity, approximate wind speed and degree of cloud cover were recorded at the beginning of every collection period. Baits were removed and replaced with previously unused baits so that no bait was left in the woodlot for more than nine days.

8,157 individuals of 19 species of Drosophila were removed from the woodlot over the 18-day trapping period. The most abundant species and their approximate relative frequencies in the collections were D. putrida (0.35), affinis (0.25), tripunctata (0.11), falleni (0.09), robusta (0.06), and algonquin (0.05). The daily relative abundance data were analyzed using factor analysis and multiple regression (SPSS). Of the large number of data manipulations tried, the outcome that explained the largest amount of variability gave the following results. For the fungus-feeding species (predominantly D. putrida, tripunctata, and falleni), the regression of abundance on time was positive, large and highly significant. The increase in population size was not unexpected for these species as the experiment was carried out in late summer when large numbers of mushrooms were evident throughout the woods. For D. affinis--which has a population flush much earlier in the year--the regression of abundance on time was in fact negative in sign, but not significantly different from zero.

Thus, extensive trapping has failed to reduce population size of D. affinis significantly despite the fact that flies were probably not immigrating in numbers large enough to replace the trapped individuals. Apparently, replacements are abundantly available from within the small isolated woodlot.

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References: Dobzhansky, Th. and S. Wright 1943, Genetics 28:304-340; Johnston, S. and W.B. Heed 1975, Am. Nat. 109:207-216.

Gupta, J.P. Banaras Hindu University, Varanasi, India. A list of drosophilid species so far known from India.

There has always been a conspicuous gap in our knowledge of world distribution of Drosophila where India is concerned. Although a beginning of such study in the subcontinent of India was made as early as 1920, only about a decade ago have workers shown renewed interest in such study. During these years several collections undertaken by various workers in different parts of the country have yielded considerable data on Indian species. Recently our extensive surveys in different localities of northeast India have uncovered several interesting new species inhabiting this region. A few of them have already been published; manuscripts for those remaining are in preparation and have also been included in this list. In this report an attempt is made to include all species so far described and recorded from India. However, the final picture of the Indian drosophilid species seems to be far from complete. There are undoubtedly more species awaiting discovery.

Genus Amiota Loew	1. shillongensis	Singh & Gupta (in press)
Genus Cacoxenus Loew	2. punctatus	Duda 1924, Syn. of Gitonides perspicax Knab 1914. Ref. McAlpine 1968, Canad. Entomol. 100(5):514.
Genus Chymomyza Czerny	3. vaidyai	Okada 1976, Nom. nov. for Chymomyza pararufithorax Vaidya & Godbole 1973, DIS 50:71.
Genus Curtonotum Macquart	4. neoangustipennis	Dwivedi & Gupta (in press)
Genus Gitonides Knab	5. perspicax	Knab 1914
Genus Hypselothyrea de Meijere	6. guttata	Duda 1926
	7. varanasiensis	Gupta 1974
Genus Leucophenga Mik	8. albicincta	(de Meijere 1908)
	9. flavicosta	Duda 1926
	10. guttiventris	(de Meijere 1911)
	11. interrupta	Duda 1924
	12. neoangusta	Vaidya & Godbole 1976
	13. shillongensis	Dwivedi & Gupta (in press)
	14. subpollinosa	(de Meijere 1914)
Genus Liodrosophila Duda	15. angulata	Dwivedi & Gupta (in press)
	16. okadai	Dwivedi & Gupta (in press)
	17. penispinosa	Dwivedi & Gupta (in press)
	18. rufa	Okada 1974
Genus Lissocephala Malloch	19. metallescens	(de Meijere 1914)
	20. sabroskyi	Wheeler & Takada 1964
Genus Microdrosophila Malloch	21. purpurata	Okada 1956
Genus Mycodrosophila Oldenberg	22. gratiosa	(de Meijere 1911)
Genus Paraleucophenga Hendel	23. invicta	(Walker 1857)
Genus Scaptomyza Hardy	24. cristata	Singh 1976
	25. graminum	(Fallén 1823)
	26. pallida	(Zetterstedt 1847)
	27. plumata	Singh 1976