Mather, Wharton B. University of Queensland, Australia. Inter-yearly fluctuation of D. rubida inversion polymorphism. It has been shown previously that certain inversions vary significantly in frequency in different ecological niches and between sexes (Mather, 1963b), at different times of the year (Mather,

1964) and in different geographical regions (Mather, 1966b). It is the purpose of this report to record inversion frequency at the same time of the year over a three year period at two different stations in Papua - New Guinea.

Material was collected from fermenting banana baits at Bulolo in August 1963 - 1965 a and at Bisianumu (Port Moresby) in May 1963 - 1965.

The material was analysed by mating males from the wild against a standard strain and scoring seven larvae from each mating against a photographic map (Mather, 1961). Salivary chromosomes were prepared by the method given in Strickberger (1962).

The inversions recorded are described in a number of publications (Mather, 1961, 1963a and c, 1966a).

The results are set out in Tables I and II. In 1963 and 1964 at Bisianumu inversions IIRB and I and IIRD, H and G were confounded. These tables clearly show that there is no detectable trend in the inversion frequencies over this three year period.

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References: Mather, W. B. 1961. Chromosomal Polymorphism in Drosophila rubida Mather. Genetics, 46:799. Mather, W. B. 1963a Notes on the Inversions of Drosophila rubida. DIS, 37:104. Mather, W. B. 1963b. Ecological and Sexual Variation in Drosophila rubida inversion polymorphism. Heredity, 18:109. Mather, W. B. 1963c. Further Inversions in Drosophila rubida. DIS, 38:55. Mather, W. B. 1964. Temporal variation in Drosophila rubida inversion polymorphism. Heredity, 19:331. Mather, W. B. 1966a. New Inversions in Drosophila rubida. DIS, 41:125. Mather, W. B. 1966b. D. rubida inversion polymorphism. DIS, 41:126. Strickberger, M. W. 1962. Experiments in Genetics with Drosophila. John Wiley.

Table 1. Port Moresby

Table 2. Bulolo

Chromosome		1963 %	1964 %	1965 %	Chromosome	1963 %	1964 %	1965 %
II	+	44.1	35.2	49.4	II +	0	0.3	0
	LA	0.9	3.1	1.1	LA	14.4	16.8	7.4
	RA	5.4	4.9	5.1	RA	35.6	41.6	41.2
	В	7407	-7	10.17	В	7	25.8	14.19
	I	-12.7	-23.5	2.8 -12.9	I	-44.9	17.7 43.3	27.03 -41.2
	С	28.9	29.6	19.1	C	0.4	0.3	0.7
	D	٦	7	14.6	$\mathbf{D}^{\perp}$	7	76.5	73.0
	H	-26.5	-34.0	0 -30.3	H	99.6	22.3 - 99.4	25.7 -99.4
	G			15.7	G		0.6	0.7
							-	
III	+	54.9	56.2	51.1	III +	27 <b>.1</b>	28.3	32.4
	Α	3.4	0.6	5 <b>.1</b>	<b>A</b>	0	0.3	1.4
	В	3.4	1.8	3.9	В	: 0	0.3	1.4
	D	4.4	4.3	3.9	D	53.4	52.0	50.0
	E	32.4	34.0	38.8	E	49.6	51.7	50.0
	F	10.3	7.0	6.2	F	0	0.3	0
	H	0	0.6	1.1	H	12.3	13.6	10.8
	I	0	0	0	I	21.6	16.5	14.9
Flie	s scored	102	181	89	Flies scored	121	172	74