

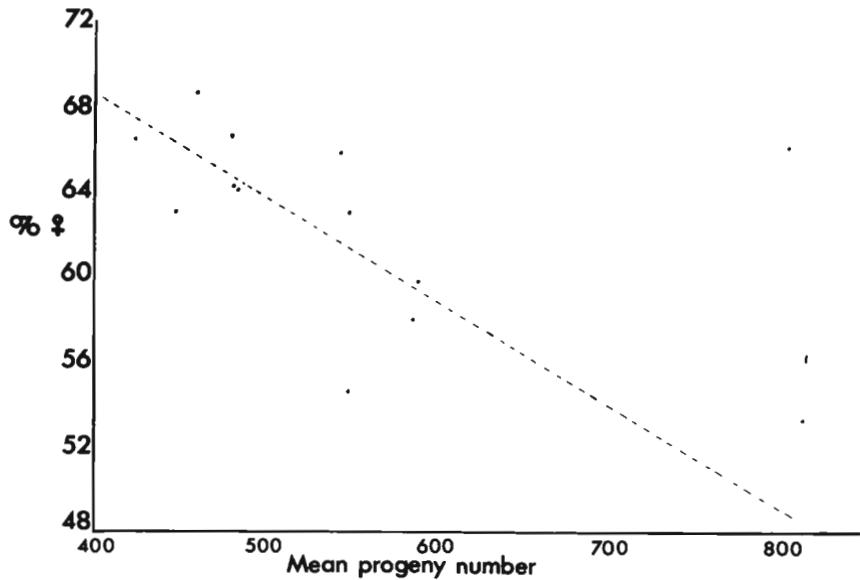
homozygous lethal because of lethals or deletions at the break points, the rest being homozygous lethal because of mutations appearing independently of the rearrangements.

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General inverse relationship between percentage of females and progeny number.

complete RD background. The summarized data are given in Table 1 and Figure 1. It seems clear that with a single exception (one run of BV8) the greater the mean percentage of females, the lower the mean progeny number. This is consistent with the proposed mechanism in RD -- the loss of spermatids receiving a broken Y chromosome during meiosis (Erickson, 1965; Hanks, 1964). The single exception ($p < .05$ for progeny number) means that the high percentage of

Table 1. Pooled results of testing single males (10 to 17) extensively by mating to five al, ru females. The mean percentage of females given is unweighted.

Stock source	Sterile cultures	Total progeny	$\bar{X} \%$	\bar{X} No. of progeny per ♂
Barcelona, Spain (BS8)	3	5,477	54.5	548
Blacksberg, Virginia (BV8)	2	5,789	64.2	482
	1	8,796	66.2	800
Capetown, Africa (CA7)	0	8,776	59.0	585
Controls	1	8,153	66.6	480
	0	6,373	67.4	425
	1	5,049	68.5	459
Quiryath, Israel (QI11)	2	9,830	53.3	819
Riverside, California (RC9)	2	7,051	59.8	588
	0	5,812	64.0	484
Santiago, Chile (SC11)	1	6,265	63.0	448
Syosset, New York (SY6)	0	6,519	65.7	543
Yoncalla, Oregon (YO1)	1	7,128	63.0	548



females and the lowered progeny number are not necessarily associated. Maybe the RD mechanism in spermatogenesis is the same in the exceptional line but some component surrounding fertilization or sperm storage is different or else the meiotic mechanism is different but still giving a high percentage of females. It should be interesting to find out. There is of course a slight possibility that during backcrossing to RD females

Fig. 1. Data from Table 1 is plotted in graph form. It shows generally an inverse relationship between percentage of females and mean progeny number.

that an RD Y chromosome was substituted for the natural population Y chromosome. Even if this did occur in one or two cases it would not change the general result nor explain the one exception. It is noteworthy that a number of population Y chromosomes do have significant RD activity.