but 5 in the X-ray series. The progeny obtained from a 2 day egg sample was recorded. Apparent X/0 males, which were characterized by a yellow body colour, were tested for sterility. All males could be included in the calculation of the rate of sex chromosome loss (X/0 males/ females + males + X/0 males), because none were fertile. The following table contains the pooled data of 3 repeats, which gave very similar results:

dose	y sn^3 females	"Oster" females
0 R	0.71% (11/691+837+11)	0.54% (3/256+294+3)
2000 R	4.37% (44/406+557+44)	2.33% (46/750+1180+46)

With both types of females the sex ratio of the normal progeny (females/males) is decreased in the irradiated group. For the y sn^3 females it falls from 0.82 to 0.73, for the "Oster" females from 0.87 to 0.64. This results from the higher rate of X-ray induced dominant lethals in the ring-X-bearing sperms compared to the Y-bearing sperms (Bauer, H., 1942 Chromosoma 2: 407). In the irradiated series the rate of apparent X/0 males is nearly doubled if y sn^3 females instead of "Oster" females are used for the test cross. Statistically (Kastenbaum, M.A. and K.O. Bowman, 1970 Mutation Res. 9: 527) the difference between 4.37% and 2.33% is significant. On the other hand, our data with the "Oster" females are not different from the corresponding data of B. Leigh (1968, Mutation Res. 5: 432). He used the same type of males and Inscy;bw;st p^p females.

In order to test the possibility that the different rates of X/0 males result from a lower viability of Inscy/0 males compared with the y sn^3/0 males, we crossed females of both stocks to XY/0 (y su(w^a)w^a KS·KL y$^+$, Parker 110-8) males. With y sn^3 females we got 897 X/XY females and 1414 X/0 males. In the case of "Oster" females, we obtained 793 X/XY females and 925 X/0 males. These data show that with the "Oster" stock a somewhat lower frequency of X/0 males (53.8%) is found compared to y sn^3 flies (61.2%). This viability difference of X/0 males is far too small to explain the different rates of recoverable X/0 males in the X-ray experiment. Therefore we assume that the maternal genome, possibly via a repair system present in the oocytes (Rinehart, R.R., 1964 Genetics 49: 855), influences the rate of recoverable X/0 males after exposure of mature sperm in the male.

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Fowler, G. University of Oregon, Eugene, Oregon. Suppression of SD by an XY Ring.

Novitski has synthesized an XY chromosome which genetically and cytologically appears to be a ring (XY^c). Since it has been shown previously (Enns, 1970) that XY chromosomes reduce the k value of SD-72/"sensitive" cn bw from 0.99 to about 0.85, it was decided to combine XY^c with SD-72 bw (the SD-72 bw is recovered normally from the "sensitive" background with a k value of 0.99+). Using XY^c/0;SD-72 bw/cn bw males from three different XY^c lines, the following results were obtained:

	Total Progeny		
♂	SD-72 bw	cn bw	k value
Line 1	475	461	0.51
Line 2	124	122	0.50
Line 3	49	46	0.51

It seems clear from the findings that there appears to be a relationship between the recovery of SD-72 bw and XY^c such that in the presence of the ring the normal recovery of SD-72 bw ($k = 1.0$) is completely suppressed ($k = 0.5$). The fact that the recovery of SD can be altered by a number of different chromosomal rearrangements is well known. Complete suppression of the recovery of the SD chromosome when the X and Y chromosomes are in the configuration of a ring is an interesting addition to these observations.

Reference: Enns, R.E., 1970 DIS 45: 136.