has 2n=6, whereas here we have 2n=8. It also departs from D. kepulauana in having V-shaped Y chromosome and basic type of dots while in D. kepulauana Y is rod shaped and the dot chromosomes with added heterochromatin are slightly thicker and longer. The other member of the same series with entire silvery frons -- D. kohkoa, is characterized by the pinched constriction in the third chromosome which is always accompanied by the dot. This species also has a small amount of added heterochromatin to the dot which gives it a comma-shaped appearence (Wilson et al, 1969). This has not been observed in the present species. The karyotype described by Ray Chaudhuri and Jha (1969) consists of 6 pairs of chromosomes in metaphase configuration and 6 arms (5 long and one short arm) in salivary gland nuclei. Our findings are different from this.

Recounting the similarities and differences that are exhibited by the members of the nasuta subgroup, the species herein described must be either D. nasuta sensu strictu or a new species of the nasuta subgroup for which confirmation is needed. Further this species is highly polymorphic in having duplications and deficiencies and a multitude of inversions which will be presented elsewhere.

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Sanjeeva Rao, M. and S. U. Devi. Osmania University, Hyderabad-7, AP., India. Induction of mutations in D. melanogaster with radioisotypes - ^{90}Sr and ^{131}I.

Even though much work was done on the induction of mutations in Drosophila by ionizing radiations and chemicals, the possible mutagenic effects of radioisotopes have received little attention. Blumel (1950) reported that phosphorus-32 induces mutations in Drosophila while Rubin (1950) observed mutagenicity in microorganisms. Sr^{90} and I^{131} are more powerful radioisotopes than phosphorus-32 and to assess their genetic damage in Drosophila the following experiments were carried out.

Two concentrations of each isotope were tried. The isotope was mixed in food medium. Flies were allowed to lay eggs on this medium and the offspring were allowed to grow on the medium containing the isotope. The treated males were crossed individually with 3 virgin females of y sc^{S1} In-49 sc^{8};bw;st for three days only to assess the genetic damage in spermatozoa alone. The F_1 females were mated individually with y sc^{S1} In-49 sc^{8} males while the males were mated with bw;st females to score for sex linked recessive lethals and translocations, respective in the F_2 generation. The results are presented in Table 1.

Table 1

Treatment	Sex linked recessive lethals				Translocations			
	T	l	%	Chi-square value	T	l	%	Chi-square value
1. Control	505	1	0.2	-	712	-	-	-
2. Sr^{90} 0.2µcc in 100cc of food	329	8	2.12	9.3	439	3	0.68	4.94
3. Sr^{90} 1.0µcc in 100cc of food	268	5	1.86	6.33	247	3	1.21	8.74
4. I^{131} 1.00µcc in 100cc of food	436	8	1.83	6.64	-	-	-	-
5. I^{131} 2.00µcc in 100cc of food	363	5	1.40	4.28	347	2	0.6	4.2

T = Total number of X chromosomes or F_1 sons scored; l = Lethals recorded; t = translocations recorded

These preliminary studies indicate that ^{90}Sr and ^{131}I cause mutations in D. melanogaster similar to phosphorus - 32.