

Patton, J. L. and W. B. Heed. University of Arizona. Elevational differences in gene arrangements of *D. pseudoobscura* in the Santa Catalina Mountains, Tucson.

On April 12 and 26, 1964, *D. pseudoobscura* males were collected from four different elevations and habitats in the Santa Catalina Mountains near Tucson and crossed to laboratory virgin females containing the Standard (ST) gene arrangement kindly supplied by Dr. Th. Dobzhansky.

A total of 100 pair matings were made from each locality and an attempt was made to analyze both homologues of chromosome III by scoring at most six larvae from each pair. Thus, the ideal number of chromosomes from each locality is 200; the table shows that all pair matings were not successful. Soldiers Trail is at 3000' in the Lower Sonoran Desert of paloverde and sahuaro. Molino Basin is at 4500' in the Upper Sonoran Chaparral of juniper, piñon pine and scrub oak. Windy Point is at 6000' in the Upper Sonoran Oak-Pine Woodland. Organization Ridge is at 7200' in the Transition Zone of almost pure Ponderosa pine. April 12 at Windy Point and Organization Ridge was the earliest possible collecting date for 1964. There is no significant difference of inversion frequencies between dates within any locality and there is no significant difference between adjacent elevations. However, the inversion frequencies in every other elevation are significantly different at the 5% level using a 4 x 2 contingency test. The Arrowhead (AR) and Chiricahua (CH) inversions both steadily increase in frequency with increase in elevation and at 7200 feet they do so at the expense of Pikes Peak (PP) which was also increasing in the same direction. The elevations of greatest diversity of genotypes are also the areas probably most ecologically diverse for *pseudoobscura*, Molino Basin and Windy Point, the Pikes Peak gene arrangement being the indicator.

	N	AR	ST	CH	PP
<u>Soldiers Trail</u>					
April 12	106	77.35	16.04	4.72	1.99
April 26	92	80.44	11.94	5.44	2.18
Total	198	78.79	14.14	5.05	1.01
<u>Molino Basin</u>					
April 12	142	82.41	8.44	6.33	2.82
April 26	56	83.93	7.14	5.36	3.57
Total	198	82.82	8.08	6.06	3.03
<u>Windy Point</u>					
April 12	64	85.96	1.56	7.80	4.68
April 26	116	85.34	2.58	7.76	4.32
Total	180	85.56	2.22	7.78	4.44
<u>Organization Ridge</u>					
April 12	44	86.34	2.28	11.38	-
April 26	130	89.23	2.31	8.46	-
Total	174	88.51	2.30	9.19	-

Kim, K. W. Chunnam National University, Korea. Chromosomal studies of Korean *Drosophila* species.

In order to examine the karyotype and its intra-specific variation, a number of strains of several different species of Korean *Drosophila* were investigated.

Larval ganglion smear method were used for the determination of the metaphase chromosome configuration.

5 species were checked, among which *D. immigrans* Sturtevant (Kwangju strain) is quite similar to type 1 reported by Clayton and Ward (1954), but differs from it in having J-shaped chromosome instead of V-shaped chromosome. The karyotype of *D. brachynephros* Okada (Chiri strain) consists of 5 pairs of rod-chromosomes and a pair of dot-chromosomes, and this is the same configuration of *D. transversa* Fallen. The remaining 3 species, *D. melanogaster* Meigen, *D. auraria* Peng, *D. virilis* Sturtevant were identical with the karyotypes reported by previous workers.