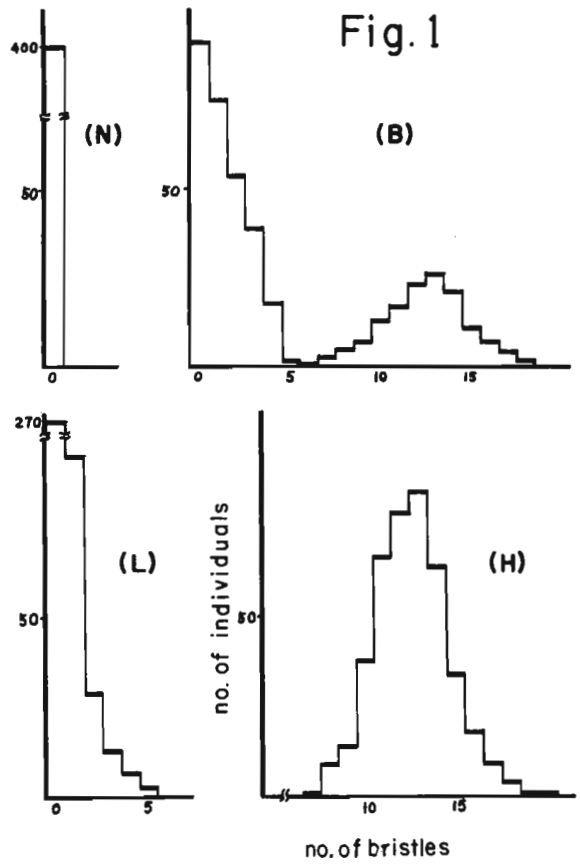
Hihara, F. Tokyo Metropolitan University, Tokyo, Japan. On the first sternite bristles of D. busckii.



The first sternite bristle number of wild strains of D. busckii varies from zero to twenty. However, precise observation made it possible to divide the species into three groups concerning the bristle number. They are as follows: 1. N-type. All of the flies in a population have no bristles. 2. L-type. Flies having 0-1 bristle are most frequent, while those having 2-5 bristles are much less frequent in a population. 3. B-type. Bristle counts in a population consist of two modes, one of which is L-like, ranging from 0-5, the other of which is H-like, normal but rather flat, ranging from 6-20 (Fig. 1, N,L,B). H-type. Experimental population representing only high mean number of the bristles is isolated from the B-type wild strain (Fig. 1, H).

In natural populations, B-type seemed to be most popular. L-type seemed to be less frequent than the former. N-type was found in only one locality consisting of small population at Kiso Valley. No natural population has been known to come under H-type.

Relative frequency of the L-like and the H-like flies within a population designated B-type varies as geographical strain. But no population in which H-like flies exceeded L-like flies has been found in nature.

Wheeler (1960) has proposed that first sternite in the Drosophilidae has eventually been modified in shape during its evolutionary course. Further investigation on the present species may be available to confirm this proposition.

Enns, R.E. University of Oregon, Eugene, Oregon. Segregation in males with XY-X chromosomes with and without free Y's and the segregation distorter chromosome, SD-72.

Using a series of X·Y chromosomes in conjunction with SD-72 (recovery normally on the order of 100%) in males having an otherwise completely sensitive background to SD, it was shown that, while males with only X·Y chromosomes showed a marked decrease in SD recovery (from an expected k value of .99 to approximately .85), similar males containing a free Y in addition to the X·Y arrangement demonstrated k values on the order expected from SD-72 males (i.e., .99+).

When various Y's lacking fertility factors ("Y-testers", developed by Brosseau, 1960) in addition to a series of X duplications (for varying lengths of heterochromatin) and Y fragments ($Y^S \cdot Y^S$ and Y^L) were substituted for the free Y, all of the Y-testers with the exception of KL-2 gave high k values; high k values were also realized for the Y^L fragment but not for any of the X-duplications nor for the $Y^S \cdot Y^S$ fragment.

Chromosome or fragment	K value
KS-1	.99-1.00
KS-2	.97-1.00
KL-1	.98-.99
KL-2	.87-.91
KL-3	1.00
KL-3,4	.99-1.00
KL-4,5	1.00
$Y^S \cdot Y^S$	.81-1.00
Y^L	.97-.98
Dp(1;f) 112	.89-.95
Dp(1;f) 1488	.88-.95

It is interesting to note that the implied vital region of the extra Y, around KL-2, was found by Brosseau (1964) to suppress variegation in $X/B^{SV}Y$ males.

References: Brosseau, G.E., Jr., 1960 Genetics 45: 257-274. Brosseau, G.E., Jr., 1964. Genetics 50: 237.