Table 2. Progeny size per five females of the various D.obscura group species at 23, 18 and 14°C.

Species	23°C	18°C	14°C	Average
subo	189.7±70	312.7±26	129.0±52	210.4±38
obsc	205.7±20	333.0±37	85.7±23	208.1±38
tris	62.7± 6	117.3±16	149.0±64	109.7±23
subs		128.0±43	60.7±20	87.6±24
ambi	194.7±22	163.7±32	147.3±67	168.6±23
bifa	94.0±19	296.0±39	156.3± 3	182.1±32
pseu	173.0±24	258.3±15	323.0±57	251.4±28
pers	137.0±17	188.0±28	208.3±35	177.8±17
mira	84.0±32	79.0±23		82.2±18
affi	32.0±12	24.0±15	13.5± 5	24.4± 7
algo	43.7± 9	64.7±16	41.0±17	49.8± 8
azte	89.7± 3	53.3± 8	57.0	69.4± 8

to be correlated with each other and a regression analysis using the data from individual cultures (not given here) gives a high significant correlation ($r=0.763$ with 33 d.f., $p<0.001$).

The differences between the subgroups obscura s.str. and pseudoobscura are less drastic. However, for the species of the pseudoobscura phylade the minimum eclosion time at 18°C starts later than for all the other species tested (Table 1). The average values are 23.7±0.3 days for the pseudoobscura species and 21.9±0.3 days for the other species. Further, for the species D.pseudoobscura and D.persimilis the average size of progeny per culture increases with decreasing temperatures; progeny sizes of almost all other species are lower at 14 than at 18°C (Table 2).

In conclusion it can be said that the ecologically relevant characters "mean progeny size" and "minimum eclosion time" at 18°C can be used to subdivide the species of the D.obscura group in subgroups which correspond with those derived from allozyme variation studies.

References: Lakovaara, S. & L.Keränen 1980, Genetika(Yugos.) 12:157-172.

Portin, P., M. Eramaja & E. Luoma-aho. University of Turku, Finland. Test of the effect of the Y chromosome on quantitative characters of Drosophila melanogaster.

The Y chromosome of Drosophila melanogaster is wholly heterochromatic and is believed to be genetically nearly completely 'inert'. It is known to carry only the bobbed gene which is the locus of rRNA-genes, and also a number of genes necessary for male fertility.

In spite of the 'inertness' of the Y chromosome the addition of extra Y to the chromosome complement of D.melanogaster females or males in many cases almost completely suppresses variegation of euchromatic genes which have been moved in the proximity of heterochromatin by structural rearrangements of chromosomes (Schultz 1939). Mather (1944) also suggested that the Y chromosome contained polygenes that could affect the expression of quantitative characters such as number of sternopleural chaeta. The evidence for this was based on the observation that the mean number of sternopleural chaeta was different in stocks which were presumed to differ only in their Y chromosome.

In the present study Mather's hypothesis was tested by comparing the mean numbers of sternopleural chaeta and chaeta in the last abdominal sternite in females and males of D. melanogaster carrying or not carrying and extra Y chromosome. The presence of the extra Y in the chromosome complements was verified by making use of the suppressive effect of the extra Y on variegation. In (1)w^{m4}/In(1)w^{m4}/Y females (XXY-females) and In(1)w^{m4}/Y/Y males (XYY-males) have wild-type eyes while In(1)w^{m4}/In(1)w^{m4} females (XX-females) and In(1)w^{m4}/Y males (XY-males) have mottled eyes. XX- and XXY-females as well as XY- and XYY males were picked up from an In(1)w^{m4}-stock in which an extra Y chromosome was segregating. Two independent experiments were made. In both of them the numbers of sternopleural bristles as well as the number of bristles in the last abdominal sternite were counted in at least 30 XX- and XXY-females and 30 XY- and XYY-males.

The mean numbers of sternopleural bristles and bristles of the last sternite in XXY- and XX-females as well as in XYY- and XY-males in the two experiments are given in Table 1. As appears from the table, there were no significant differences in the bristle numbers between XXY- and XX-females or XYY- and XY-males. Thus the results suggest that the extra Y chromosome has no effect on the numbers of sternopleural bristles or bristles of the last sternite.

Table 1. Effect of the extra Y chromosome on the numbers of sternopleural bristles and bristles of the last sternite in females and males.

	Number of flies	Mean number of bristles ± S.D. Sternopleurals	Significance of the difference	Last sternite	Significance of the difference
Experiment No. 1					
XXY-females*	32	11.81±1.53	t = 1.25 n.s.	16.47±3.08	t = 0.41 n.s.
XX- females	33	11.33±1.57		16.12±3.76	
XYY-males	32	10.78±1.70	t = 0.52 n.s.	15.38±2.95	t = 1.90 n.s.
XY- males	39	11.00±1.91		16.55±2.03	
Experiment No. 2					
XXY-females	30	12.03±1.45	t = 0.15 n.s.	16.73±2.73	t = 0.13 n.s.
XX- females	30	11.97±1.71		16.83±3.19	
XYY-males	30	10.80±1.97	t = 0.14 n.s	16.87±2.17	t = 1.47 n.s
XY- males	30	10.87±1.84		15.97±2.54	

* The presence of the extra Y chromosome in the chromosome complement of females and males was verified by making use of its suppression on variegation in In(1)w^{m4}.

The results of the present study are thus in contradiction with those of Mather (1944) and suggest that the Y chromosome does not contain any genes affecting the quantitative characters which Mather calls "minor genes" or polygenes (Mather 1941). The discrepancy between the results of the present study and those of Mather is possibly due to that the stocks investigated by Mather differed slightly in other chromosomes thant Y as well and/or to too small sample sizes (10) in Mather's study.

References: Mather, K. 1941, J.Genet. 41:159-193; Mather, K. 1944, Proc.Roy.Soc.London B. 132:308-332; Schultz, J. 1939, Proc. 7th Intl. Genet. Congress 257-262.

Prevosti, A., L. Serra & M. Monclus. University of Barcelona, Spain. Drosophila subobscura has been found in Argentina.

D.subobscura was considered a typically palaeartic species distributed all over Europe, North Africa and the Near East, until it was found in Chile in 1978 (Brncic et al. 1981). Since then samples have been taken all around the country, from La Serena (29°55' South) to Punta Arenas (53°80' South)(Budnik & Brncic 1982), being the most abundant species in the majority of sampled populations.

In October 1981, during a collecting trip through the southern part of the country, we decided to find out if the species had been able to cross Los Andes mountain range, which constitutes an ecological barrier that separates Chile from Argentina. From Coyhaique southwards, the ecological conditions are quite different on each side of the mountain range, being the Argentinian part a dry and windy "pampa," where only few scattered bushes are found. The species was not found in this area. So we tried to find it northwards and chose San Carlos de Bariloche, which is an Argentinian resort next to Nahuel Huapi Lake. There is a natural pass from the Chilean side to Bariloche, with a lot of lakes and continous arboreal vegetation. The sample was taken in a suburbial part of the village, near the lake, for all day long. From a sample of 998 individuals caught, 987 were D.subobscura, 1 D.immigrans and 10 Scaptomyza melancholica.

We also tried to find out if the species had reached the eastern part of Argentina, in Buenos Aires. A sample was taken near Ezeiza Airport in a forest, not far away from the city. Although a great number of individuals belonging to different Drosophila species were trapped, D.subobscura was not found in the area. We think it most probable that the species has dispersed in Argentina to the north and south from Bariloche. On the other hand, dispersion to the east will be most difficult because the "pampa" separates this area from the Atlantic shore.

References: Brncic et al. 1981, Genetica 56:3-9; Budnik, M. & Brncic, D. 1982, Actas V Congreso Latinoamericano de Genetica 177-188.