

Table S1. Principal component analysis (PCA) on meteorological data and fertility levels of Bi90 and 153 *D. melanogaster* strains.

Principal component loadings						
Variable	PC1	PC2	PC3	PC4	PC5	PC6
Temperature	+0.931	+0.207	-0.184	-0.087	+0.121	+0.183
Humidity	+0.703	-0.026	+0.344	+0.579	-0.228	+0.007
Wind speed	-0.757	+0.329	+0.195	+0.423	+0.316	+0.050
Air Pressure	-0.906	-0.250	+0.145	-0.073	-0.257	+0.154
Air Pressure change	+0.287	-0.726	+0.568	-0.159	+0.206	+0.011
Fertility (log)	+0.078	+0.725	+0.595	-0.331	-0.068	-0.011
Supplementary variable	PC1	PC2	PC3	PC4	PC5	PC6
Experiment*	+0.939	+0.105	-0.084	-0.037	-0.036	+0.219
Within-day fertility variance*	+0.080	+0.694	+0.539	-0.280	-0.036	+0.017
	PC1	PC2	PC3	PC4	PC5	PC6
PC Eigenvalue	2.844	1.267	0.888	0.662	0.279	0.060
Proportion of variance	0.474	0.211	0.148	0.110	0.047	0.010
Cumulative variance	0.474	0.685	0.833	0.943	0.990	1.000

* - supplementary variables were not used in PCA to determine PCs