New sample of drosophilids from the Font Groga site, Barcelona (Spain).

Pineda, L., C. Esteve, M. Pascual, and F. Mestres*. Dept. Genètica, Universitat de Barcelona, Barcelona (Spain). *Corresponding author: fmestres@ub.edu

A new sample of drosophilids was obtained from Font Groga (Barcelona) on 9th October 2013. This site has been described in detail in Araúz *et al.* (2009) and Canals *et al.* (2013). Flies were netted over 12 baits containing fermenting bananas placed along a trail from 4 to 7 pm. The number of flies classified according to species and sex is presented in Table 1.

Table 1. Number and percentage of adult flies collected in Font Groga (Barcelona, Spain) on 9th October 2013.

Species	Total	Percentage
D. subobscura (♂)	58	12.18
D. subobscura (♀)	240	50.42
D. simulans (♂)	33	6.93
D. menalo/simulans (♀)	87	18.28
D. suzukii (♂)	13	2.73
D. suzukii (♀)	25	5.25
D. immigrans (♂)	1	0.21
D. immigrans (♀)	11	2.31
D. phalerata (♂)	1	0.21
D. phalerata (♀)	5	1.05
Scaptomiza sp.	2	0.42
Total	476	100

The most abundant species is *D. subobscura* (62.60%). This is expected because the sample was obtained during its autumn peak of expansion (Krimbas, 1993). Also interesting is to find again *D. suzukii*, and in a percentage similar (9.20%) to that obtained in 2012 sample (Canals *et al.*, 2013). This species invaded recently many European regions (Calabria *et al.*, 2010) and seems it is well established.

We have finally estimated the species diversity using *H'* (Shannon diversity index) and *J* (Shannon uniformity index). The values obtained were 0.990 and 0.615, respectively. They are similar to those estimates obtained in the same site by Calabria (2012) in autumn 2007 and higher than those of Canals *et al.* (2013) in late autumn 2012.

References: Araúz, P.A., F. Mestres, C. Pegueroles, C. Arenas, G. Tzannidakis, C.B. Krimbas, and L. Serra 2009, J. Zool. Syst. Evol. Res. 47: 25-34; Calabria, G., 2012, Ph. D. Dissertation, Universitat de Barcelona (Spain); Calabria, G., J. Máca, G. Bächli, L. Serra, and M. Pascual 2010, J. Appl. Entomol. 136: 139-147; Canals, J., J. Balanyà, and F. Mestres 2013, Dros. Inf. Serv. 96: 185-186; Krimbas, C.B., 1993, *D. subobscura*. *Biology, Genetics and Inversion Polymorphism*, Verlag Dr. Kovac, Hamburg, Germany.

Chromosomal polymorphism of *D. subobscura*: no differences between wild males and sons of wild females.

Zivanovic, G.[1], C. Arenas[2], and F. Mestres[3,*]. [1]Dept. of Genetics, Institute for Biological Research "Sinisa Stankovic". University of Belgrade, Serbia; [2]Dept. d'Estadística, Universitat de Barcelona, Barcelona, Spain; [3]Dept. Genètica, Universitat de Barcelona, Barcelona, Spain. *Corresponding author: fmestres@ub.edu

When analyzing the chromosomal polymorphism of *D. subobscura* natural populations it is assumed that the information provided by wild males and sons of wild females is equivalent. Thus, using both in the analysis it is possible to increase the sample size. However, it is important to verify whether there are significant differences between both groups or not. The aim of this research has been to statistically compare the results of chromosomal polymorphism of both groups. We have used data from Avala Mountain (Serbia) where *D. subobscura* flies were collected from the 30th May to the 5th June 2011. Avala is located 18 km south of Belgrade and the trapping place is a forest with polydominant communities of *Fagetum submontanum*

Table 1. Frequencies of chromosomal arrangements for wild males and sons of wild females (Avala Mountain population). The number of individuals is indicated by *n.*

Chromosome arrangements	Wild males		Sons of wild females	
	n	%	*n*	%
A_{st}	7	31.8	13	46.4
A_1	10	45.5	8	28.6
A_2	5	22.7	7	25.0
Total	22		28	
J_{st}	7	15.9	15	26.8
J_1	37	84.1	41	73.2
Total	44		56	
U_{st}	2	4.5	6	10.7
U_{1+2}	24	54.6	33	58.9
U_{1+2+6}	13	29.5	12	21.4
U_{1+8+2}	5	11.4	5	8.9
Total	44		56	
E_{st}	7	15.9	15	26.8
E_{1+2}	1	2.3	1	1.8
E_{1+2+9}	20	45.5	25	44.6
$E_{1+2+9+12}$	3	6.8	1	1.8
E_8	13	29.5	14	25.0
Total	44		56	
O_{st}	6	13.6	12	21.4
O_{3+4}	18	40.9	26	46.4
O_{3+4+1}	3	6.8	8	14.3
O_{3+4+2}	2	4.5	/	/
O_{3+4+5}	1	2.3	1	1.8
O_{3+4+6}	1	2.3	1	1.8
O_{3+4+7}	1	2.3	/	/
O_{3+4+8}	5	11.4	2	3.6
O_{3+4+17}	1	2.3	/	/
O_{3+4+22}	6	13.6	6	10.7
Total	44		56	

mixtum at 450 m a.s.l. (Zivanovic and Mestres, 2010). Males and sons of wild females were crossed with virgin females of the Küsnacht strain. Third instar larvae from F_1 were dissected to obtain the salivary glands and the polytene chromosomes were stained and squashed in aceto-orcein solution. In Table 1, we present the chromosomal polymorphism obtained for both groups (males and sons of wild females).

Fisher's exact test was used to compare the chromosomal composition of wild males and sons of wild females (statistically significant *p-value* < 0.05). This test is more precise than chi-squared when the expected frequencies are small (Zivanovic *et al.*, 2014). The corresponding *p-values* were obtained by bootstrap procedure (100000 runs). No significant differences were observed for any chromosome of the karyotype: A (*p-value* = 0.485), J (*p-value* = 0.230), U (*p-value* =0.572), E (*p-value* = 0.536), and O (*p-value* = 0.338). Thus, it seems that the two groups can be grouped together to obtain the chromosomal polymorphism of the population.

References: Zivanovic, G., and F. Mestres 2010, Hereditas 147: 70-81; Zivanovic, G., C. Arenas, and F. Mestres 2014, Russ. J. Genet. 50: 638-644.

Monthly fluctuations in abundance of *Drosophila willistoni* and the relationship with rainfall in the northern region of the Brazilian Atlantic Forest.

Garcia, Ana Cristina Lauer[1], Jordany Gomes da Silva[1], Danúbia Guimarães Silva[1], Martín Alejandro Montes[2], and Claudia Rohde[1]. [1]Laboratório de Genética, Centro Acadêmico de Vitória, Universidade Federal de Pernambuco, Rua do Alto do Reservatório s/n, 55608-680, Vitória de Santo Antão, PE, Brazil; [2]Departamento de Biologia, Universidade Federal Rural de Pernambuco,