

Table S1. Maximum likelihood models of selection on Sxl in *Drosophila*, the Tephritidae and *M. domestica* sequences.

Branch(es)	Model	N of parameters	Log-likelihood
-	One ratio	1	-4540.06
-	Nearly neutral	2	-4483.80
-	Positive selection	4	-4483.80
Basal- <i>Drosophila</i>	Local relaxation	4	-4321.44
	Local selection	5	-4316.86
Basal-Tephritidae	Local relaxation	4	-4352.71
	Local selection	5	-4349.98
<i>Drosophila</i>	Local relaxation	4	-4359.67
	Local selection	5	-4359.67
Remainder	Local relaxation	4	-4379.65
	Local selection	5	-4379.65