Supporting Information

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SI Text

Consistency of Dispersal Behavior Within Individuals and Among-Trait Correlations. A total of 58% of the tested individuals showed either ballooning or rappelling behavior. At the individual level, the dispersal mode was consistent, with only 26 individuals (8.7%) performing a mixed strategy. A total of 59.2% of the dispersing individuals did only rappel during the trials, whereas 32.1% dispersed solely by ballooning. Repeatability of the duration of either ballooning or rappelling behavior was high during the trials (ballooning: $Z = 2.00$, $P < 0.023$; rappelling: $Z = 3.98$, $P < 0.001$), with intraclass correlation coefficients of 0.496 ± 0.121 SE for rappelling and 0.312 ± 0.151 SE for ballooning.

Because 42% of the tested individuals showed no dispersal behavior under laboratory conditions, correlations among traits are evident. Obviously, the total number of tiptoe events strongly correlates with the frequency of ballooning ($R_{518} = 0.51$, $P < 0.0001$), the frequency of rappelling ($R_{518} = 0.65$, $P < 0.001$), and the total duration of tiptoe behavior during a trial ($R_{518} = 0.95$, $P < 0.001$). The correlation with climbing activity was much weaker ($R_{518} = 0.24$, $P < 0.001$). These correlations remained significant when individuals with no dispersal behavior were excluded (R_{318}, respectively, 0.36, 0.32, and 0.84; $P < 0.001$). Similarly, correlations between total duration of the tiptoe behavior during a trial and frequency of ballooning ($R_{518} = 0.45$, $P < 0.001$) and rappelling were strong ($R_{518} = 0.63$, $P < 0.001$). A weak positive among-individual correlation exists between web building and tiptoe frequency ($R_{518} = 0.10$, $P < 0.024$), but this correlation was no longer significant after Bonferroni correction. No other correlations were found.

Table S1. Genetic variance components for all traits under study

Variance component	Sire	Sire × temp	Dam(sire)	Dam(sire) × temp	Residual
Climbing activity	≈0	0.116 ± 0.065	≈0	≈0	1.534 ± 0.109
Time until maturation	8.545 ± 8.003	2.470 ± 6.920	5.157 ± 6.322	≈0	172.45 ± 13.828
Longevity after maturation	5.327 ± 20.468	≈0	16.943 ± 28.763	24.230 ± 23.964	455.33 ± 36.868
Number of egg sacs	0.769 ± 0.890	≈0	0.141 ± 0.767	≈0	16.749 ± 1.680
Eggs egg sac 1	0.005 ± 0.005	≈0	≈0	≈0	0.116 ± 0.0115
Lifetime fecundity	0.020 ± 0.017	≈0	≈0	≈0	0.326 ± 0.032
Ballooning frequency	0.078 ± 0.134	0.389 ± 0.187	0.004 ± 0.065	0.060 ± 0.121	1.166 ± 0.083
Rappelling frequency	0.008 ± 0.089	≈0	0.103 ± 0.076	0.076 ± 0.089	1.546 ± 0.109
Total tiptoe duration	≈0	≈0	19.959 ± 21.461	26.931 ± 24.906	627.211 ± 44.498
Rappelling probability	0.071 ± 0.153	≈0	0.179 ± 0.132	≈0	0.977 ± 0.066
Ballooning probability	0.229 ± 0.174	0.367 ± 0.225	≈0	≈0	0.852 ± 0.058
Ballooning duration	≈0	≈0	≈0	0.035 ± 0.135	1.308 ± 0.218
Rappelling duration	≈0	≈0	≈0	0.027 ± 0.062	1.327 ± 0.151
Web building	0.277 ± 1.038	≈0	0.307 ± 1.088	≈0	33.432 ± 2.338