

**Supplementary Figure 1**. Relationship between length specific growth rates (cm/day) and ln initial length across both terrestrial moisture treatments ( — solid line). Low moisture treatments are represented by brown circles ( $\bullet$ ) and high moisture treatments are represented by blue triangles ( $\blacktriangle$ ).

**Supplementary Table 1**. Results from ANCOVA to examine the effects of terrestrial moisture (low, high), and larval density (low, high) and initial mass on evaporative water loss rate of *A. maculatum*.

Factor	df	F	p
Mass	1	0.55	0.46
Moisture treatment	1	0.001	0.97
Density treatment	1	0.78	0.38
Mass x moisture treatment	1	0.04	0.84
Mass x density treatment	1	0.58	0.45
Moisture treatment x density treatment	1	0.0025	0.63
Mass x moisture treatment x density treatment	1	0.05	0.83

**Supplementary Table 2**. Results from ANCOVA to examine the effects of terrestrial moisture (low, high), larval density (low, high), mass at the start of the evaporative water loss (EWL) trial, and evaporative water loss on rates of water reuptake in *A. maculatum*. Statistically significant results are shown in bold.

Factor	df	F	p
Mass	1	4.3	0.04
Moisture treatment	1	6.94	0.02
Density treatment	1	0.0003	0.99
<b>Evaporative water loss (EWL)</b>	1	8.79	0.005
Mass x moisture treatment	1	2.35	0.13
Mass x density treatment	1	1.35	0.25
Moisture treatment x density treatment	1	0.05	0.82
Mass x EWL	1	1.42	0.24
Moisture treatment x EWL	1	0.5	0.48
Density treatment x EWL	1	3.28	0.08
Mass x moisture treatment x density treatment	1	0.69	0.41
Mass x moisture treatment x EWL	1	0.79	0.38
Mass x density treatment x EWL	1	7.59	0.009
Moisture treatment x density treatment x EWL	1	1.31	0.26
Mass x moisture treatment x density treatment	1	0.95	0.33