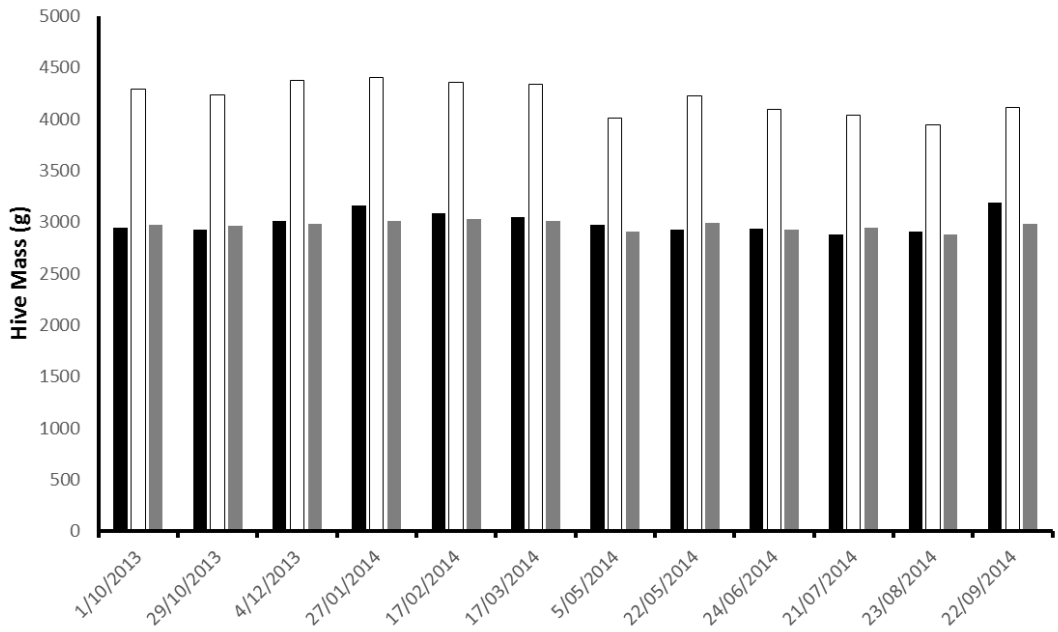

Fig. S1. The average masses of *Austroplebeia essingtoni* Hives 1 (black), 2 (white) and 3 (grey) maintained over the course of the 12 months of our study period, demonstrating that, although Hive 2 was generally heavier than the other two hives, no hive showed obvious seasonal fluctuations in mass. From this we infer that colony size did not alter markedly throughout the year, and the capacity to regulate the hive was therefore consistent.

Table S1. Average absolute metabolic rates (VCO_2) and evaporative water loss rates (EWL) recorded at each experimental temperature in each season.

	T_a (°C)	Mass (mg)	VCO_2 (mL.h^{-1})	EWL (mL.h^{-1})
Dry winter	20	4.6 ± 0.08	4.78×10^{-3} ± 7.24×10^{-4}	1.56×10^{-5} ± 1.74×10^{-6}
	25	4.9 ± 0.16	1.90×10^{-2} ± 2.18×10^{-3}	6.46×10^{-4} ± 1.38×10^{-4}
	35	4.3 ± 0.12	3.73×10^{-2} ± 1.77×10^{-3}	9.34×10^{-4} ± 1.55×10^{-4}
	40	4.7 ± 0.21	4.77×10^{-2} ± 4.77×10^{-3}	2.18×10^{-3} ± 1.02×10^{-4}
	45	4.6 ± 0.20	5.19×10^{-2} ± 7.35×10^{-3}	2.09×10^{-3} ± 2.91×10^{-4}
Wet summer	15	4.4 ± 0.14	9.82×10^{-3} ± 1.56×10^{-3}	6.59×10^{-4} ± 8.01×10^{-5}
	25	4.1 ± 0.11	2.68×10^{-2} ± 2.98×10^{-3}	1.42×10^{-3} ± 1.26×10^{-4}
	35	4.2 ± 0.24	3.84×10^{-2} ± 2.36×10^{-3}	3.46×10^{-3} ± 4.45×10^{-4}
	40	4.4 ± 0.26	1.10×10^{-2} ± 4.22×10^{-3}	7.08×10^{-3} ± 7.04×10^{-4}