

Table S1. Oxygen consumption rates for individual worms

Worm weight (g)	Time burrowed (min)	Distance burrowed (cm)	Resting oxygen consumption ( $\mu\text{g O}_2 \text{g}^{-1} \text{h}^{-1}$ )			Burrowing oxygen consumption ( $\mu\text{g O}_2 \text{g}^{-1} \text{h}^{-1}$ )		
			From			From		
			From water	hemoglobin	Total	From water	hemoglobin	Total
0.75			4.6	5.5	10.1			
0.415			10.6	9.8	20.4			
0.37			17.5	4.3	21.8			
0.524			9.3	2.2	11.5			
0.483			8.1	10.4	18.5			
0.238			16.5	11.4	27.9			
0.41	93	12.5	22.9	7.5	30.4	1.7	1.0	2.7
0.25	32	6.0	50.2	40.0	90.2	16.5	13.1	29.6
0.388	27	6.2	12.0	0	12.0	6.0	3.3	9.3
0.191	37	5.6	26.9	15.0	41.9	4.5	2.4	6.9
0.167	37	5.5	18.9	5.0	23.9	9.9	0	9.9
0.276	30	4.5	52.8	22.5	75.3	37.3	14.0	51.3
0.562	7	1.0	18.9	10.9	29.8	12.4	8.6	21.0
0.174	50	6.5	53.5	12.0	65.5	37.3	2.4	39.7
0.353	65	9.5	50.8	0	50.8	56.8	5.5	62.3
0.428	25	5.2	5.5	11.7	17.2	8.0	2.4	10.4
0.231*	11	2.5	12.4	10.0	22.4	39.6	24.5	64.1
0.265	70	6.0	42.0	16.7	58.7	19.3	5.1	24.4
0.599	30	6.0		N/A		35.5	18.0	53.5
0.15	21	5.5		N/A		18.1	11.4	29.5
0.361±0.163	38.2±23.8	5.9±2.7	24.1±17.5	10.8±9.3	34.9±23.7	21.6±16.7	8.0±7.3	29.6±21.3

\*Outlier.