Supplementary information for: Short-term acclimation in adults does not predict offspring acclimation potential to hypoxia

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Table S1. Annotation and expression data of ten differentially expressed genes putatively identified as haemocyanin using the most significant match (lowest E-value) generated by BLAST searches (BlastP and BlastX) against the UniProt/Swissprot database. Gene expression data for each of the hemocyanin genes are presented as TMM-normalised transcripts per million (TPM). Log-2 fold changes (FC) and associated probability (adjusted P-value, P_{adj}) are also shown.

Contig	Annotation	Accession number	Identity (%)	E-Value	Gene expression (TPM)						Log_2 FC	P_{adj}
					100%_1	100%_2	100%_3	40%_1	40%_2	40%_3		
DN65240_c0_g2	HCY_PALVU	P80888	62.25	0	0.38	0.14	0.03	0.51	5.40	2.974	3.91	1.34e-04
DN68344_c0_g5	HCY_PALVU	P80888	76.98	3e-165	2.26	2.30	1.52	5.64	50.33	31.29	3.89	7.85e-08
DN69931_c0_g7	HCY_PALVU	P80888	55.48	2e-118	6.71	5.86	2.77	21.01	180.21	114.21	4.38	1.27e-09
DN69931_c0_g8	HCY_PALVU	P80888	52.68	5e-76	4.43	3.61	1.51	15.79	108.97	65.65	4.36	1.19e-09
DN70919_c0_g2	HCYA_APHSP	P14750	44.75	4e-88	11.65	9.11	3.33	2.74	2.25	1.54	-1.59	2.30e-02
DN65240_c0_g1	HCYA_PANIN	P04254	62.46	0	0.12	0.44	0.00	1.18	4.81	2.88	3.94	8.35e-05
DN69931_c0_g3	HCYA_PANIN	P04254	58.70	4e-13	20.22	26.08	14.54	77.74	468.65	296.78	3.88	1.38e-09
DN69931_c0_g4	HCYB_ASTLP	P83180	62.50	2e-09	7.50	3.20	7.19	22.26	130.92	86.11	3.81	9.41e-07
DN69931_c0_g6	HCYB_ASTLP	P83180	57.50	3e-08	0.00	0.30	0.00	0.15	7.60	4.42	4.79	7.23e-03
DN68344_c0_g1	HCYB_PANIN	P10787	60.67	3e-30	0.87	3.83	2.24	8.24	20.17	12.21	2.77	4.29e-03

Table S2. Results of two-way ANOVA for the effects of life cycle stage, O_2 regime (normoxia-100 % air saturation, hypoxia- 40 % air saturation) and their interaction on mass specific rates of O_2 uptake and critical O_2 tension (P_c).

Response	Factor	df	Sum Sq	Mean Sq	F-value	P-value
O_2 uptake	Life cycle stage	2	13.336	6.668	41.67	<0.001
	O_2 regime	1	0.136	0.136	0.85	0.365
	Stage x O_2	2	1.364	0.682	4.26	0.026
	Residuals	25	4.000	0.160		
Pc	Life cycle stage	2	35.13	17.56	23.58	<0.001
	O_2 regime	1	8.83	8.833	11.86	0.002
	Stage x O_2	2	23.49	11.745	15.77	<0.001
	Residuals	25	18.62	0.745		

Table S3. Overview of the different variables measured in each generation and life-cycle stage. All measurements were taken in individuals exposed to normoxia (100 % air saturation) or hypoxia (40 % air saturation)

Generation	Life- cycle stage	Exposure time	Measurements taken
F_0	Adult	One week	RMR Heart rate Ventilation rate Gill surface area Haemocyanin:protein Haemocyanin isoform expression
F_0 to F_1		> One week	Fitness (brood size, egg volume, developmental time and size at hatching of offspring)
F_1	Juvenile	Embryonic development and six weeks post-hatching.	O_2 uptake under declining PO_2 Pc
F_1	Adult	Until individuals reached sexual maturity (approx.3 months)	O_2 uptake under declining PO_2 Pc