

The following supplement accompanies the article

Decadal changes in blood $\delta^{13}\text{C}$ values, at-sea distribution and weaning mass of southern elephant seals from Kerguelen Islands.

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Supplementary Materials S2: Additional information on SIA data

1) Temporal evolution of $\delta^{15}\text{N}$ values

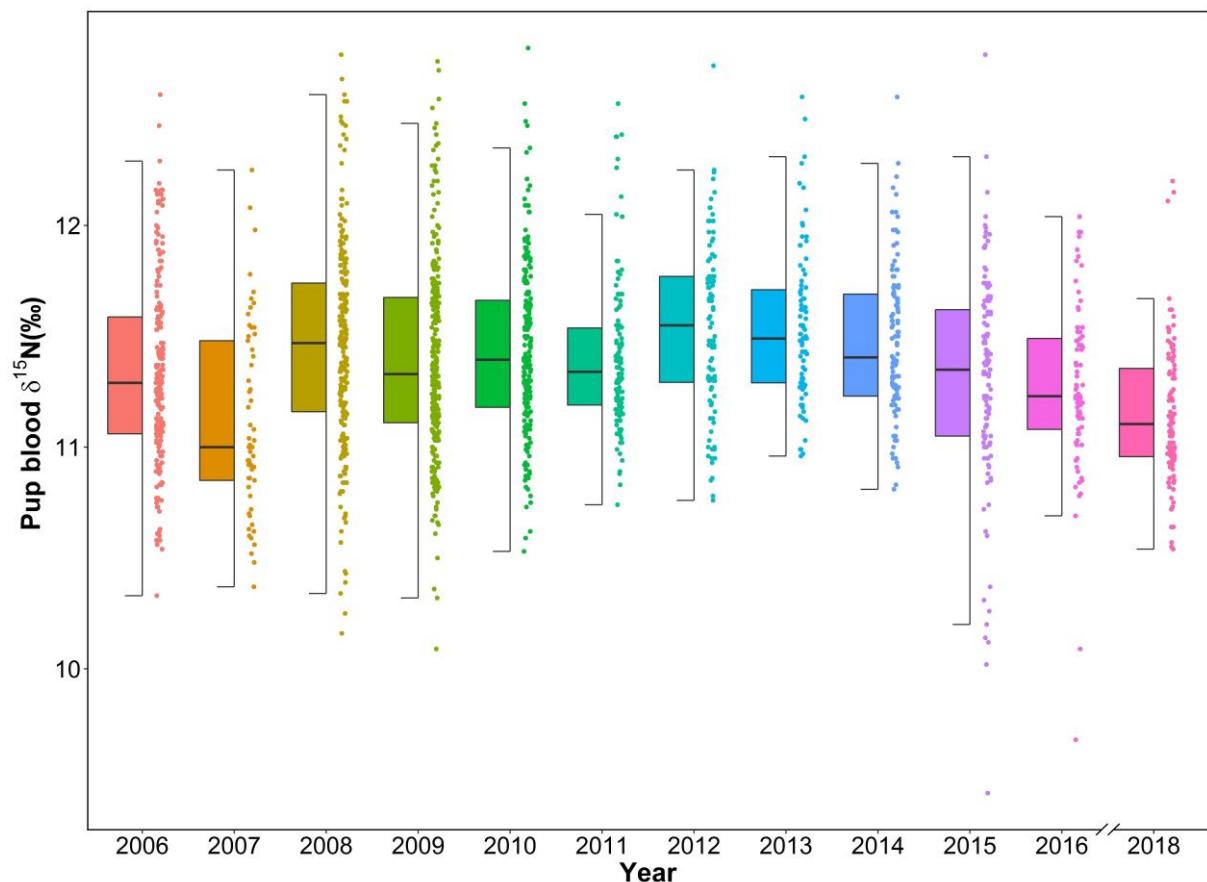


Figure S3. Hybrid box- and scatterplot of interannual blood $\delta^{15}\text{N}$ values of southern elephant seal pups at Kerguelen Islands.

2) Relationship between blood $\delta^{13}\text{C}$ values of female elephant seals and their pups' at weaning

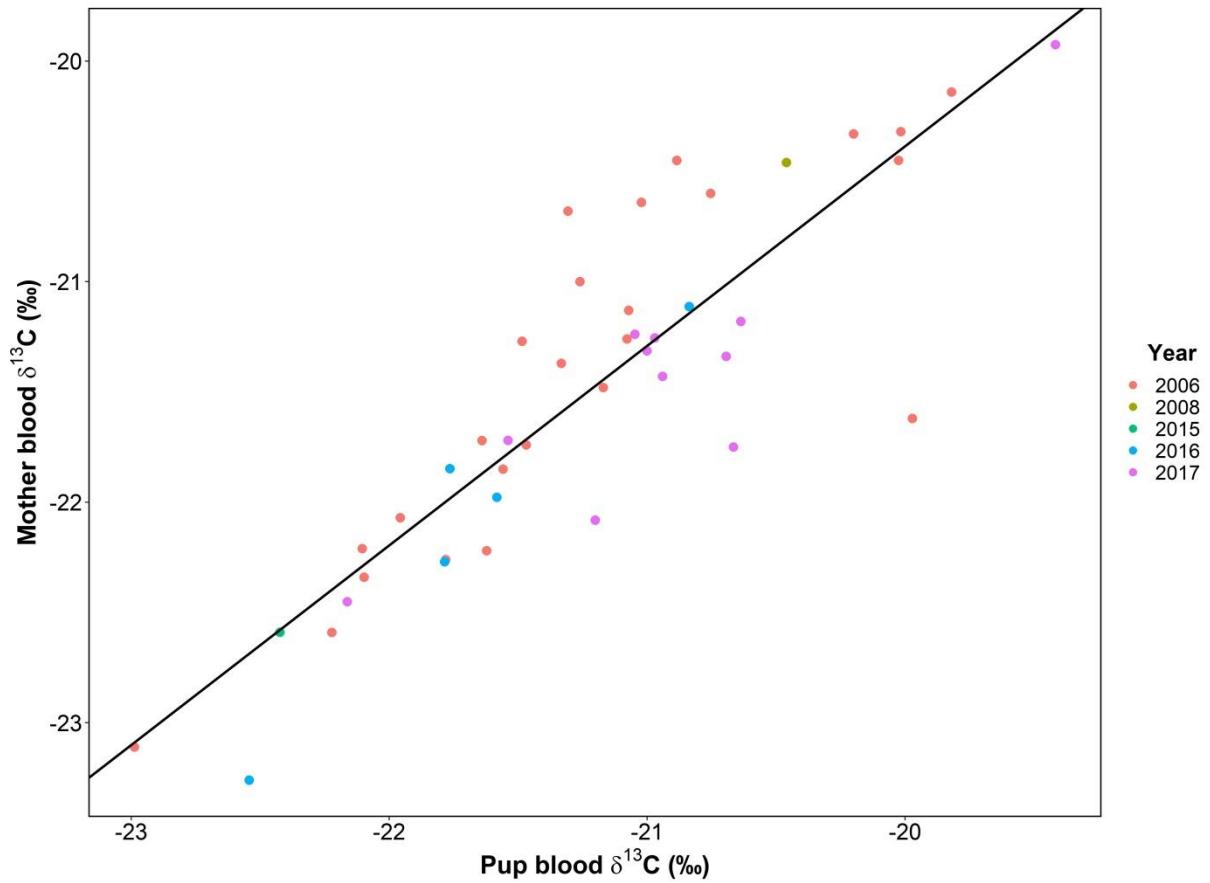


Figure S4. Relationship between blood $\delta^{13}\text{C}$ values of female elephant seals and their pups' at weaning. The black line represents a linear model applied for all years. Spearman's rank correlation test revealed a strong correlation between mother and pup blood $\delta^{13}\text{C}$ values ($\rho = 0.86$).

Table SI. Linear models establishing the relationship between female elephant seals blood $\delta^{13}\text{C}$ values (y) and the value of their pups (x).

Year	Number of mother-pup pairs	Linear model	Adjusted R²	p-value
2006	25	$y = 0.9 x - 2.6$	0.72	< 0.0001
2008	1	-	-	-
2015	1	-	-	-
2016	5	$y = 1.2 x + 4.9$	0.93	< 0.01
2017	11	$y = 0.9 x - 3.4$	0.80	< 0.0005
All years	42	$y = 0.9 x - 2.3$	0.76	< 0.0001