

Supplementary Material

Table S1. Mean breeding parameters (\pm SD) of the Adélie penguins at Edmonson Point and Adélie Cove during two breeding seasons.

	2017/18		2018/19	
	Edmonson Point	Adelie Cove	Edmonson Point	Adelie Cove
Clutch size	1.92 (\pm 0.28)	1.91 (\pm 0.28)	2.00 (\pm 0.17)	2.00 (\pm 0.16)
Hatched eggs	1.50 (\pm 0.68)	1.31 (\pm 0.72)	1.70 (\pm 0.57)	1.67 (\pm 0.47)
%Hatched	78.3	68.6	84.7	82.7

Comparison of chick growth at EdPo between study years

We fitted a linear mixed model (LMM) to compare chick mass at EdPo between 2017/18 and 2018/19 over five time periods during the chick-rearing phase. Time periods were established arbitrarily between the hatching date and when chicks entered the crèche (cf. Olmastroni et al. 2020b): 0–5 days from hatching date, 6–10 days, 11–15 days, 16–20 days, 21–26 days. We included the year as categorical predictor (reference level: 2017/18), and time period and nest identity as crossed random intercepts to account for repeated measurements in the same period and on the same nest. The response variable, i.e. chick mass, was ln-transformed to improve model residuals.

We found that the body mass of chicks regularly sampled from study nests was generally heavier in 2018/19 than in 2017/18, independently of the sampling period and the nest identity (LMM, coefficient estimates and 95% CIs: intercept=6.268 [5.376, 7.162], season 2018/19=0.371 [0.254, 0.487]; variances of random intercepts: sampling period=0.683, nest identity=0.021; Fig. S1).

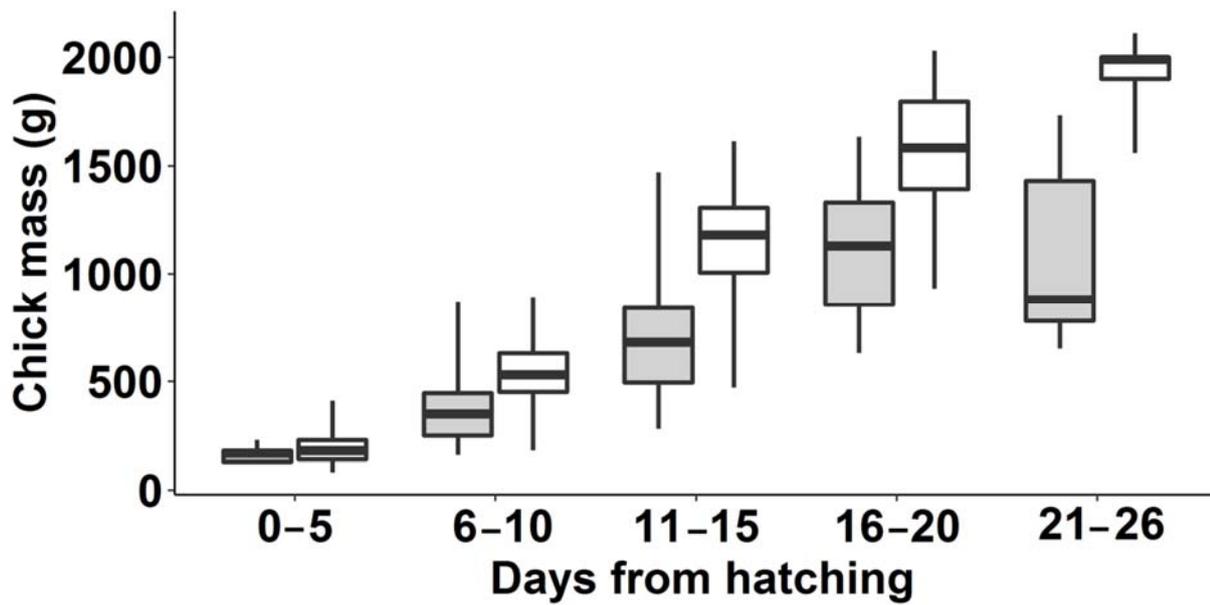


Figure S1. Observed chick mass (grams) at EdPo colony within arbitrarily-defined periods spanning hatching to late guard stage in the two study years (grey: 2017/18; white: 2018/19). The modified boxplots show median (thick line) and range (whiskers) of observed values.