

Pingers reduce the activity of Burmeister's porpoise around small-scale gillnet vessels

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Table S1. Summary of generalized linear mixed models (GLMMs) testing the effect of treatment (sets with or without pingers) and habitat variables on Burmeister's porpoise *Phocoena spinnipinnis* activity (detection positive minutes [DPM] h⁻¹) only for sets within the 100 m isobath, representing preferred porpoise habitat. a) Model selection table of the top ten best supported models is shown with the most parsimonious model in bold. b) Parameter estimates of most parsimonious model are provided (\pm SE) on a log link scale. AIC = Akaike's information criteria; logLik = log likelihood; df = degrees of freedom; Δ AIC = change in AIC from the best supported model. Depth and sea surface temperature (SST) were standardised by subtracting the mean and dividing by the standard deviation. We did not model the quadratic effect of SST as the lower sample size reduced the number of covariates we could include.

a)				
Covariates	AIC	logLik	df	ΔAIC
Treatment x (Depth +SST) + Quarter	241.56	-108.78	12	0.00
Treatment x Depth + SST + Quarter	241.81	-109.91	11	0.26
Treatment x SST + Quarter	242.94	-111.47	10	1.38
Treatment + Depth + SST + Quarter	242.95	-111.48	10	1.39
Treatment + Depth + Quarter	243.11	-112.55	9	1.55
Depth + SST + Quarter	243.89	-112.94	10	2.33
Treatment * Depth + Quarter	245.08	-112.54	8	3.52
Depth + Quarter	245.60	-114.80	7	4.04
Treatment + Depth + SST	246.64	-116.32	6	5.09
Depth + SST	247.14	-117.57	7	5.58
b)				
Parameter	Estimate			
Intercept (control, 1 st quarter)	-4.87 \pm 1.04			
Treatment (experimental)	-1.01 \pm 0.53			
Depth	-0.95 \pm 0.17			
2 nd quarter	-0.47 \pm 1.14			
3 rd quarter	-0.04 \pm 1.12			
4 th quarter	1.42 \pm 1.07			

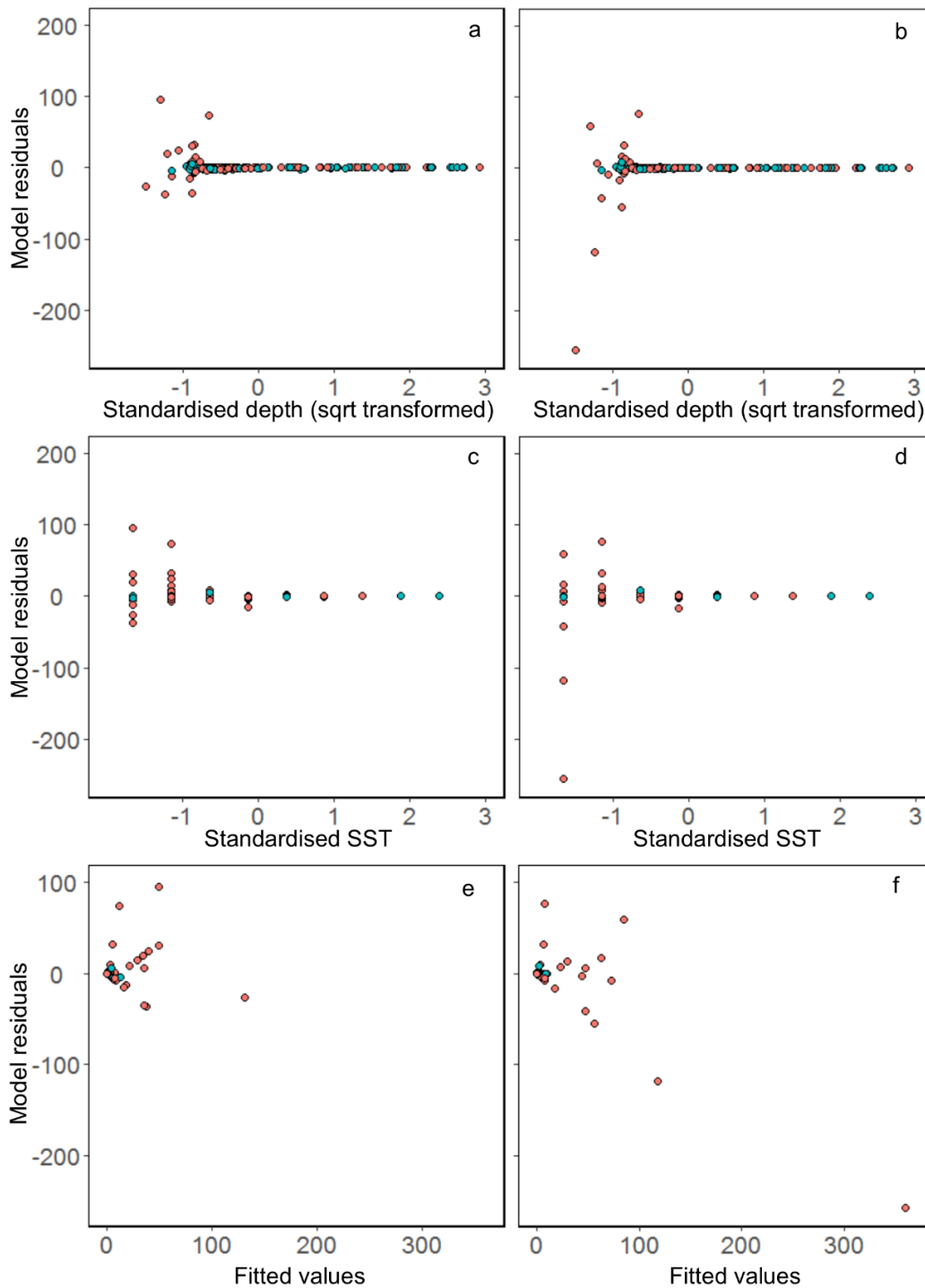


Fig. S1. Residuals for models with two parameterizations of the negative binomial distribution: where the variance increased linearly with the mean (left panel) and where it increased in a quadratic manner with the mean (right panel), plotted against standardised depth (a, b), standardised SST (c, d) and the fitted values (e, f). Red and blue dots represent control and experimental sets, respectively. For both models, there is still greater variability in residuals associated with lower values of depth and SST, which suggests there is some unexplained variance not accounted for in our models. Nonetheless, the residuals for the negative binomial model where variance increases linearly with the mean (left panel), appear more homoscedastic in all cases (i.e. constant variance).

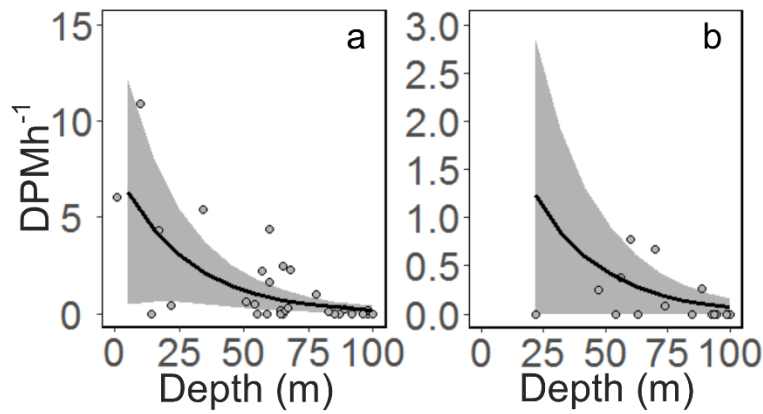


Fig. S2. Relationship between Burmeister's porpoise *Phocoena spinipinnis* activity (detection positive minutes per hour [DPMh⁻¹]) and depth for a) control (no pingers) and b) experimental (with pingers) fishing sets from models using just sets within the 100 m isobath, representing preferred porpoise habitat. Observed locations are given by grey dots and the modelled line of best fit and 95% confidence intervals are displayed by a black line and grey shading, respectively. Note that the y-axis scales are not the same for the two panels.