Supplementary Table 2

Summary results of best-fitted generalized additive models. The models were based on data from tagged oceanic whitetip shark (*Carcharhinus longimanus*) in the Atlantic and Indian oceans between 2011 and 2012, with the daily depth standard deviation (SD) as the response variable. Results, given for the model that used all 6 sharks (combined) and for each individual shark (IOCSI, AOCS3, AOCS4, AOCS5, AOCS6, and AOCS7), are the value for the regression equation (estimate), standard error (SE), *P*-value of the *t*-test (*P*r(>|t|)), explained deviance (dev. explained), coefficient of multiple determination (R^2), and the Akaike information criterion (AIC). Smoothing terms were longitude (long.) and latitude (lat.), mixed-layer depth (MLD), sea-surface temperature (SST), and shark size. edf=estimated degrees of freedom. k=number of individuals

Six species combined	Depth SD ~ s(long., lat.) + s(MLD) + s(SST) + s(size, k=6)						
	Estimate	SE	*P*r(>|t|)	Dev. explained	R^2	AIC	
Intercept	24.2282	0.1967	<0.0001	0.501	0.475	3979	***
	Approximate significance of smoothing terms						
		edf	*F*	*P*-value			
	Long. : lat.	20.976	2.951	<0.0001	***		
	MLD	3.019	15.797	<0.0001	***		
	SST	6.297	2.122	0.0364	*		
	size	4.028	7.377	<0.0001	***		
IOCS1	Depth SD ~ s(long, lat.) + s(MLD)						
	Estimate	SE	Pr(>|t|)	Dev. explained	R^2	AIC	
Intercept	29.0068	0.5143	<0.0001	0.647	0.629	405	***
	Approximate significance of smoothing terms:						
		edf	*F*	*P*-value			
	Long. : lat.	3.790	1.013	0.4150			
	MLD	1.000	52.395	<0.0001	***		
AOCS3	Depth SD ~ s(long., lat.) + s(MLD) + s(SST)						
	Estimate	SE	Pr(>|t|)	Dev. explained	R^2	AIC	
Intercept	21.6832	0.2083	<0.0001	0.647	0.686	823	***
	Approximate significance of smoothing terms:						
		edf	*F*	*P*-value			
	Long. : lat.	18.505	5.621	<0.0001	***		
	MLD	7.106	12.264	<0.0001	***		
	SST	4.381	3.685	0.0031	**		
AOCS4	Depth SD ~ s(long., lat.)						
	Estimate	SE	Pr(>|t|)	Dev. explained	R^2	AIC	
Intercept	28.9803	0.5295	<0.0001	0.510	0.412	806	***
	Approximate significance of smoothing terms:						
		edf	*F*	*P*-value			
	Long. : lat.	21.310	3.741	<0.0001	***		

Table continued

Supplementary Table 2—Continued

			Approximate significance of smoothing terms:				
		edf	*F*	*P*-value			
	Long. : lat.	10.970	4.202	<0.0001	***		
	MLD	2.895	1.584	0.1900			
	SST	8.379	7.041	<0.0001	**		
AOCS6			Depth SD ~ s(long., lat.) + s(MLD) + s(SST)				
	Estimate	SE	Pr(>|t|)	Dev. explained	R^2	AIC	
Intercept	23.3922	0.5326	<0.0001	0.401	0.338	616	***
			Approximate significance of smoothing terms:				
		edf	*F*	*P*-value			
	Long. : lat.	2.000	2.478	0.0897	.		
	MLD	1.738	2.788	0.0622	.		
	SST	5.476	2.335	0.0342	*		
AOCS7			Depth SD ~ s(long., lat.) + s(SST)				
	Estimate	SE	Pr(>|t|)	Dev. explained	R^2	AIC	
Intercept	18.9165	0.3744	<0.0001	0.403	0.302	544	***
			Approximate significance of smoothing terms:				
		edf	*F*	*P*-value			
	Long. : lat.	8.345	2.083	0.0285	*		
	SST	5.608	2.481	0.0254	*		

Significance codes: ***=0; **= 0.001; *=0.01; ·=0.05.