

**S8 Table. General additive models (GAMs) of the response of vegetation cover (%) to a combination of predictors.**

Predictor	Term type	Statistic	Dataset	
			Dive	Video
Initial depth	Smooth, ti	EDF	1.0	3.2
		F	8.9	7.4
		P	0.004	0.000
Initial percent sand	Smooth, s	EDF	4.6	NA
		F	2.7	NA
		P	0.021	NA
Reflectance change	Smooth, ti	EDF	3.3	2.3
		F	69.8	11.0
		P	0.000	0.000
Initial depth*reflectance change	Smooth, ti	EDF	2.8	1.8
		F	6.0	1.9
		P	0.001	0.100 <sup>a</sup>
Substrate change	Parametric	Coefficient	-1.58 <sup>b</sup>	NA
		F	41.4	NA
		P	0.000	NA
Combined		R <sup>2</sup> <sub>adj</sub>	88.7	27.2

Smooth terms: s = 1-dimensional smooth appropriate for a single predictor; ti = 2-dimensional smooth appropriate for a main effects-plus-interaction structure. EDF = estimated degrees of freedom; the greater the EDF the more wiggly the curve with EDF = 1.0 indicating a straight line. Note that initial reflectance was dropped from the dive GAM due to non-significance and was excluded from the video GAM due to high correlation with initial depth ( $r = -0.52$ ).

<sup>a</sup>Although not significant, dropping initial depth\*reflectance change from the model increased AIC<sub>c</sub> from 1681 to 1689. We therefore judged the model that included initial depth\*reflectance change to be the better model; <sup>b</sup>Indicates the change in  $\ln(y+1)$  transposed vegetation cover for substrate change = yes relative to substrate change = no.