Supplementary tables

Supplementary Table 1 – Comparison of models testing for diel and depth patterns in species richness
Model 1: number.species ~ offset(log(real.volume)) + as.factor(stratum) * day
Model 2: number.species ~ offset(log(real.volume)) + as.factor(stratum)

Model	Residuals degrees of freedom	Residual Deviance	Difference of Residual deviance	Pr(>Chi)	AIC
1	32	21.198			184.8543
2	40	32.686	-11.488	0.1756	189.3665

Supplementary Table 2 – Comparison of models testing for diel and depth patterns in species abundance
Model 1: count ~ offset(log(real.volume)) + as.factor(stratum) * day
Model 2: count ~ offset(log(real.volume)) + as.factor(stratum)

Model	Residuals degrees of freedom	Residual Deviance	Difference of Residual deviance	Pr(>Chi)	AIC
1	32	206.36			437.1136
2	40	241.09	-34.73	<0.01	418.3836

Supplementary Table 3 – Comparison of models testing for diel and depth patterns in *S. leucopsarus* abundance
Model 1: count ~ offset(log(real.volume)) + as.factor(stratum) * day
Model 2: count ~ offset(log(real.volume)) + as.factor(stratum)

Model	Residuals degrees of freedom	Residual Deviance	Difference of Residual deviance	Pr(>Chi)	AIC
1	32	188.32			308.06
2	40	204.75	-16.43	0.03656	308.491

Supplementary Table 4 – Comparison of models testing for diel and depth patterns in *C. signata* abundance
Model 1: count ~ offset(log(real.volume)) + as.factor(stratum) * day
Model 2: count ~ offset(log(real.volume)) + as.factor(stratum)

Model	Residuals degrees of freedom	Residual Deviance	Difference of Residual deviance	Pr(>Chi)	AIC
1	32	47.776			157.4791
2	40	59.098	-11.322	0.1841	157.4791

Supplementary Table 5 – Comparison of models testing for diel and depth patterns in all mesopelagic abundance minus *S. leucopsarus* and *C. signata*
Model 1: count ~ offset(log(real.volume)) + as.factor(stratum) * day
Model 2: count ~ offset(log(real.volume)) + as.factor(stratum)

Model	Residuals degrees of freedom	Residual Deviance	Difference of Residual deviance	Pr(>Chi)	AIC
1	32	64.70			229.8445
2	40	88.095	-23.396	0.002892	237.2402