Table 1 **Test of normality distribution (Shapiro-Wilk test) and significance (Kruskal-Wallis with Dunn post-hoc test) for sea surface temperature (SST) and chlorophyll a (Chl a) among locations.** * represent values with significant difference (p< 0.05). FBO=Farasan Banks Offshore; FBM= Farasan Banks Midshelf; FBI= Farasan Banks Inshore; TI=Thuwal.

		SST		Chl a	
		W	p	W	p
Shapiro -Wilk		0.834	<0.001*	0.825	<0.001*
		X_2	p	X_2	p
Kruskal-Wallis		17.642	0.001*	16.61	0.001*
		Z	p	Z	p
Dunn post-hoc test	FBI - FBM	1.764	0.467	2.977	0.018*
	FBI - FBO	2.53	0.069	3.536	0.003*
	FBM - FBO	1.017	1.000	0.936	1.000
	FBI - TI	4.065	0.001*	0.645	1.000
	FBM - TI	2.729	0.039*	-1.946	0.311
	FBO - TI	1.628	0.623	-2.572	0.061

Table 2 **p-values of multinomial logistic regression (MLR) coefficients among the Symbiodiniaceae for locations (FBI vs. FBM, FBO and TI), depth, sea surface temperature (SST) and chlorophyll a (Chl a).** * represent values with significant differences (p< 0.05). FBO=Farasan Banks Offshore; FBM= Farasan Banks Midshelf; FBI= Farasan Banks Inshore; TI=Thuwal.

	(Intercept)	FBM	FBO	TI	depth	SST	Chl a
Durusdinium vs Pt-1-a	**0.006***	0.267	0.099	0.640	0.099	**0.003***	0.070
Durusdinium vs Pt-1-b	0.239	0.849	0.413	**<0.001***	0.184	0.604	0.051
Durusdinium vs Pt-3-a	**0.002***	**0.001***	**0.001***	**<0.001***	0.446	**0.001***	**0.006***
Durusdinium vs Pt-3-b	**0.002***	0.436	0.766	0.785	**0.001***	**0.001***	0.460
Pt-1-a vs Pt-1-b	**0.001***	0.429	0.417	**<0.001***	0.845	**0.001***	0.672
Pt-1-a vs Pt-3-a	0.259	0.423	0.376	**<0.001***	0.435	0.443	**0.001***
Pt-1-a vs Pt-3-b	0.195	0.664	0.153	0.498	0.147	0.229	0.144
Pt-1-b vs Pt-3-a	**0.006***	**0.008***	**0.006***	-	0.600	**0.013***	**0.001***
Pt-1-b vs Pt-3-b	**0.002***	0.564	0.798	**<0.001***	0.152	**0.002***	0.505
Pt-3-a vs Pt-3-b	0.322	**<0.001***	**<0.001***	0.548	**0.024***	0.539	**0.002***