

SUPPORTING INFORMATION

Appendix S3: Extended results: Species Distribution Modeling: *C. fragile* subsp. *fragile*

This appendix summarizes the results of 10 replicate Maxent runs (see text for explanation). Figures are developed by Maxent version 3.3.2. (Phillips *et al.* 2006).

Analysis of omission/commission

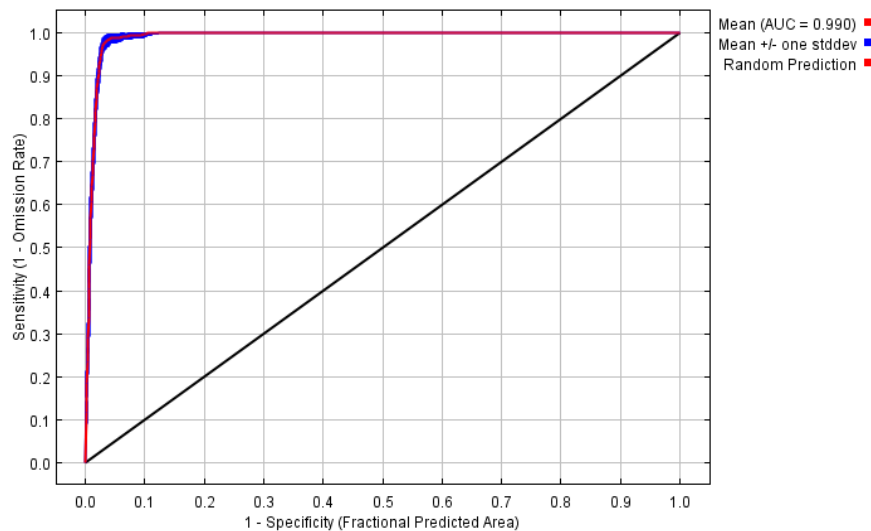


Figure S2.1 The following figure shows the receiver operating characteristic (ROC) curve, averaged over the replicate runs. The average test AUC for the replicate runs is 0.990, and the standard deviation is 0.001.

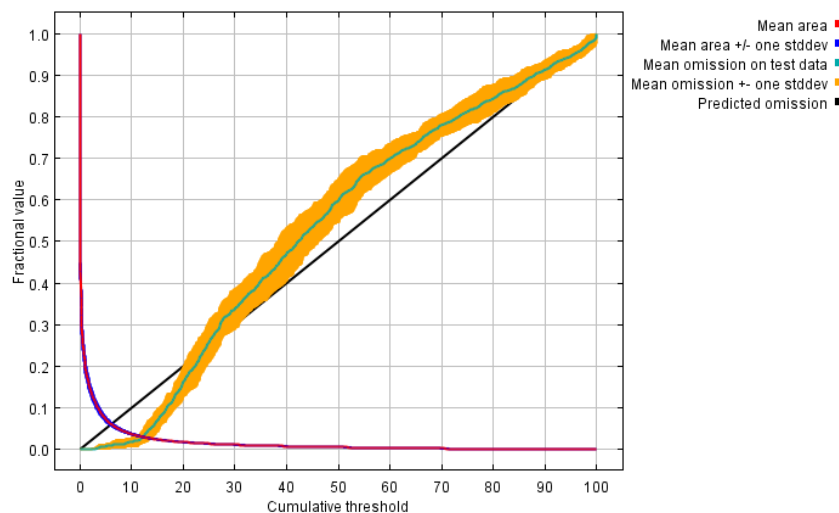


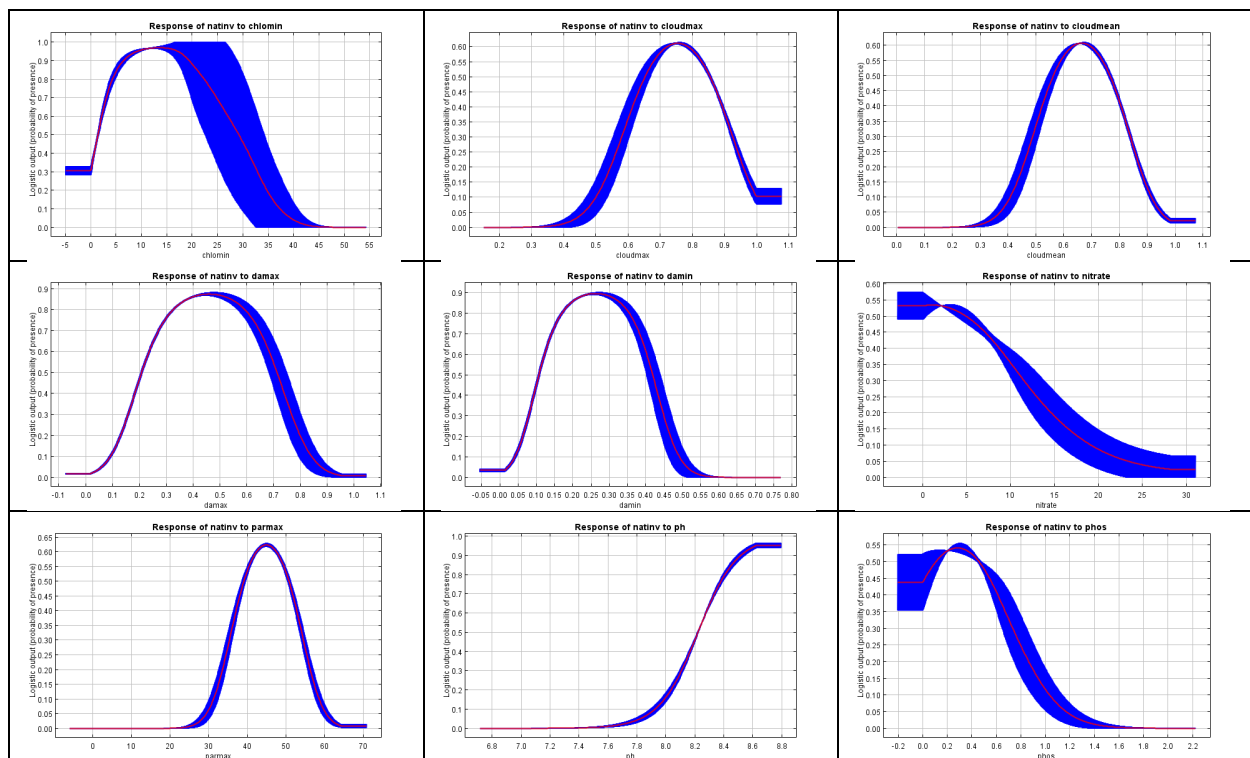
Figure S2.2 This figure shows the test omission rate and predicted area as a function of the cumulative threshold, averaged over the replicate runs.

Analysis of variable contributions

Table S2.1 This table represents an estimate of relative contributions of the environmental variables to the Maxent model. Values shown are averages over replicate runs.

Variable	Percent contribution
Sea surface temperature (RANGE)	36.3
Diffuse attenuation (MAX)	15.6
Phosphate concentration	12.5
Sea surface temperature (MEAN)	10.8
Salinity (MEAN)	8.8
PAR (MAX)	7
Cloud cover (MAX)	3.9
Nitrate concentration (MEAN)	1.7
Cloud cover (MEAN)	1.5
Diffuse attenuation (MIN)	1.1
Chlorophyll A concentration (MIN)	0.7
pH (MEAN)	0

Response curves



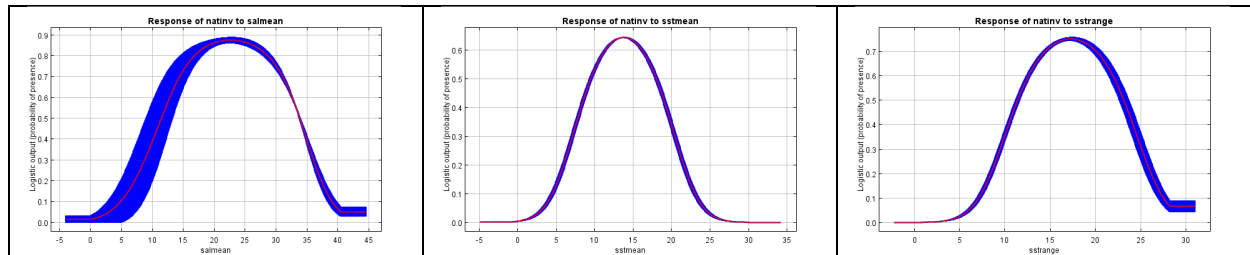


Figure S2.3 These curves represent models created using only the corresponding variable. They reflect the dependence of predicted suitability both on the selected variable and on dependencies induced by correlations between the selected variable and other variables.

Reference

Phillips S.J., Anderson R.P. & Schapire R.E. (2006). Maximum entropy modeling of species geographic distributions. *Ecol. Model.*, 190, 231-259.