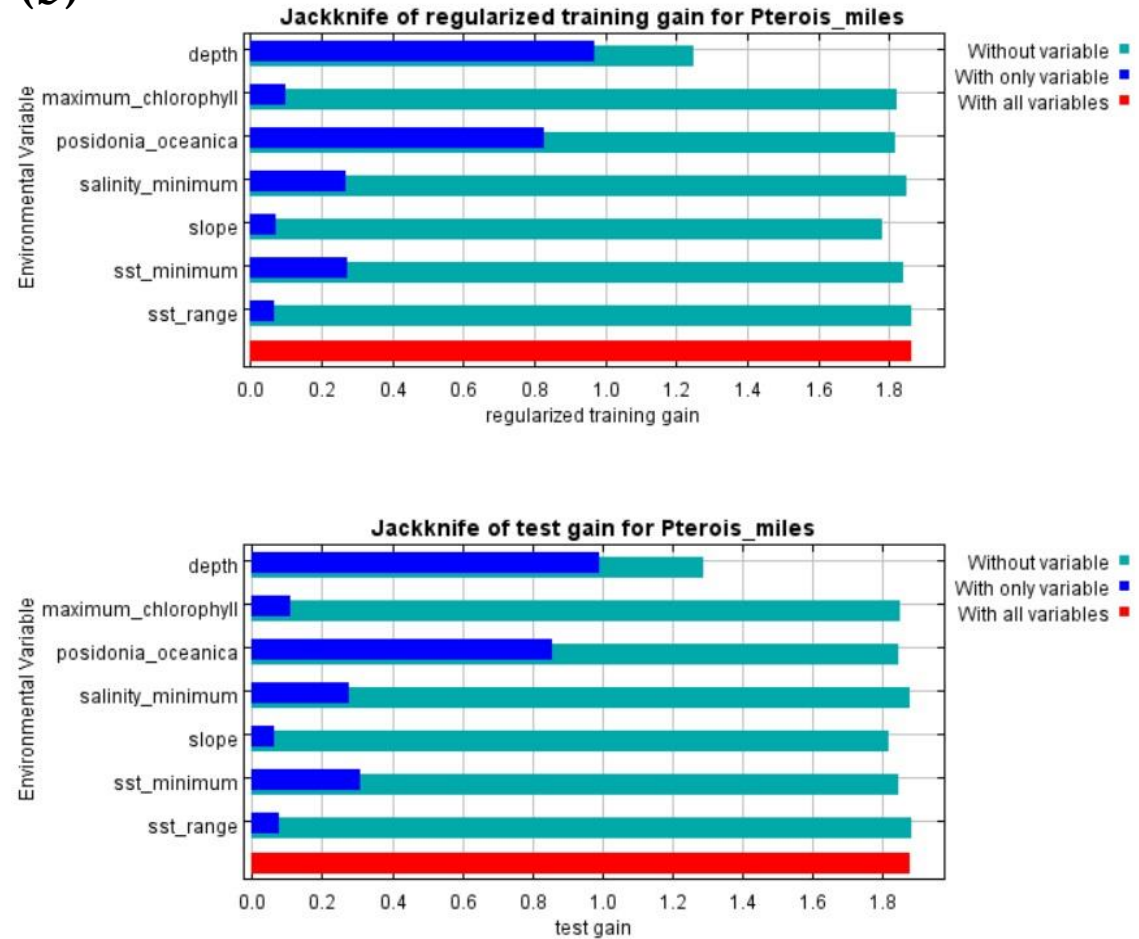


(a)

Variable	Percent contribution
depth	46.2
posidonia_oceanica	21.3
maximum_chlorophyll	11.9
salinity_minimum	10.2
slope	6.1
sst_minimum	3.6
sst_range	0.7

(b)

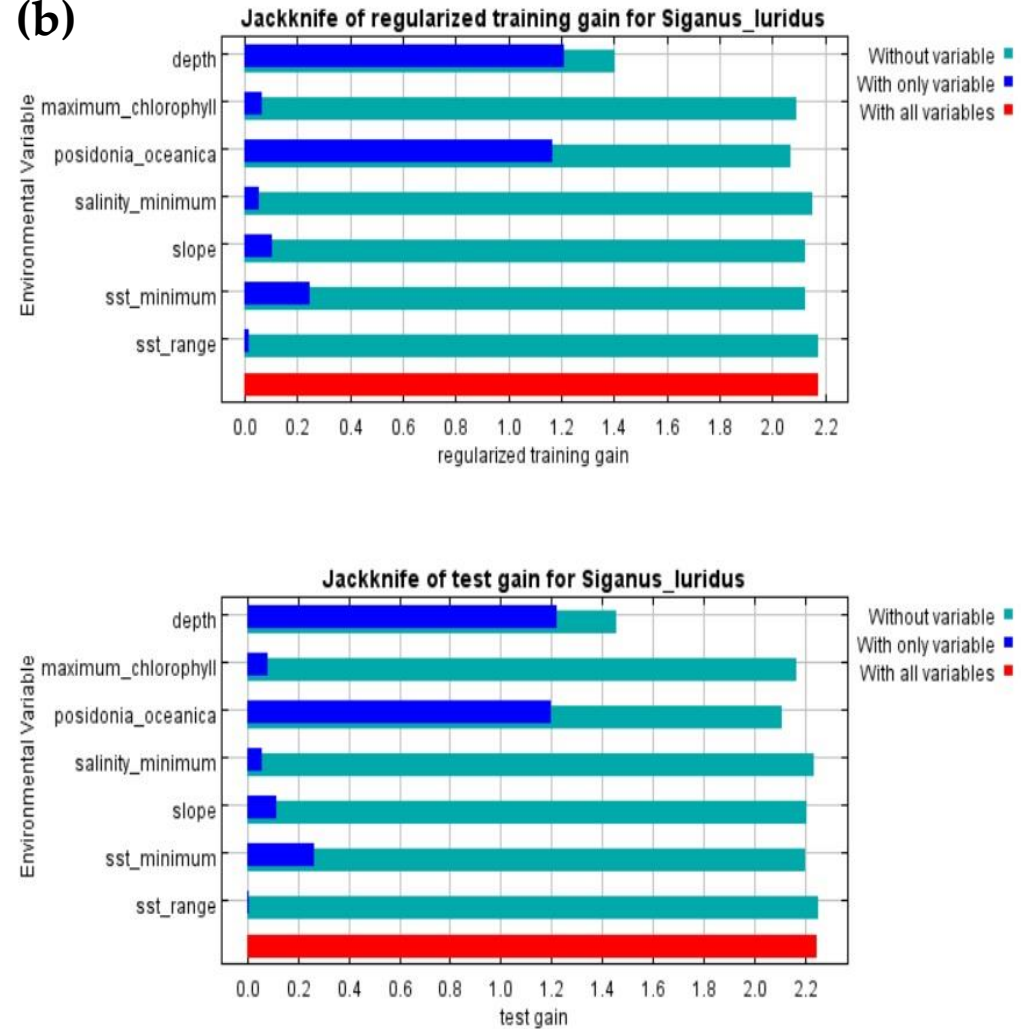


**Figure S1:** The percent contribution (a) and the jackknife table (b) of variable importance for *Pterois miles* for both training and test datasets. The gain of the environmental variables when used in isolation is represented by the blue line while the decrease in the gain when the specific environmental variable is omitted is represented with the green line. Variable explanation: depth = bottom depth (m.); maximum\_chlorophyll = mean maximum sea surface chlorophyll (mg/m<sup>3</sup>); posidonia\_oceanica = model-based distribution of *Posidonia oceanica* meadows (scale 0-4); salinity\_minimum = mean minimum sea surface salinity (psu); slope = bottom slope (degree); sst\_minimum = mean minimum SST (°C); sst\_range = mean annual SST range (°C).

(a)

Variable	Percent contribution
depth	45
posidonia_oceanica	30.9
maximum_chlorophyll	9.6
slope	6.4
sst_minimum	5.6
salinity_minimum	1.6
sst_range	0.9

(b)

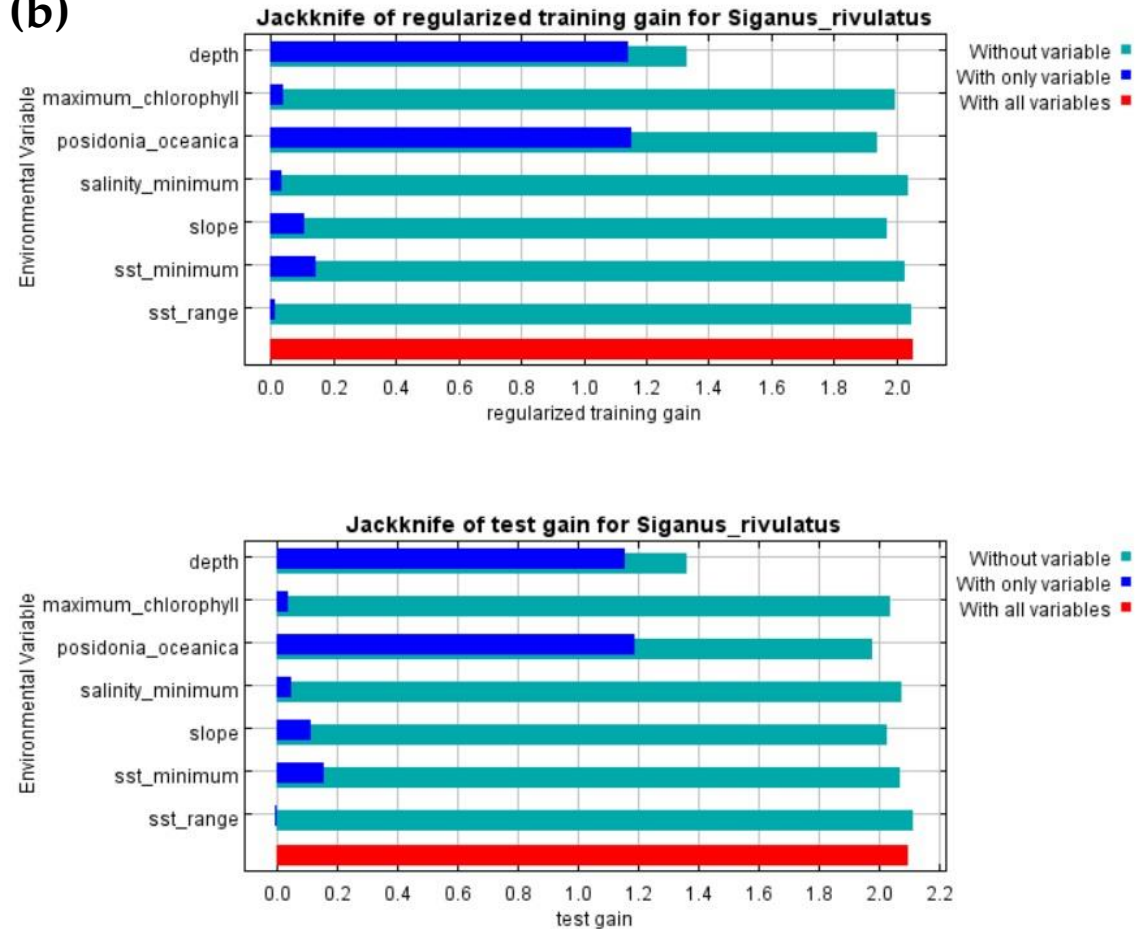


**Figure S2:** The percent contribution (a) and the jackknife table (b) of variable importance for *Siganus luridus* (for both training and test datasets). The gain of the environmental variables when used in isolation is represented by the blue line while the decrease in the gain when the specific environmental variable is omitted is represented with the green line. Variable explanation: depth = bottom depth (m.); maximum\_chlorophyll = mean maximum sea surface chlorophyll (mg/m<sup>3</sup>); posidonia\_oceanica = model-based distribution of *Posidonia oceanica* meadows (scale 0-4); salinity\_minimum = mean minimum sea surface salinity (psu); slope = bottom slope (degree); sst\_minimum = mean minimum SST (°C); sst\_range = mean annual SST range (°C).

(a)

Variable	Percent contribution
depth	43
posidonia_oceanica	37.2
slope	8.3
maximum_chlorophyll	7.4
sst_minimum	1.9
salinity_minimum	1.7
sst_range	0.6

(b)



**Figure S3:** The percent contribution (a) and the jackknife table (b) of variable importance for *Siganus rivulatus* (for both training and test datasets). The gain of the environmental variables when used in isolation is represented by the blue line while the decrease in the gain when the specific environmental variable is omitted is represented with the green line. Variable explanation: depth = bottom depth (m.); maximum\_chlorophyll = mean maximum sea surface chlorophyll (mg/m<sup>3</sup>); posidonia\_oceanica = model-based distribution of *Posidonia oceanica* meadows (scale 0-4); salinity\_minimum = mean minimum sea surface salinity (psu); slope = bottom slope (degree); sst\_minimum = mean minimum SST (°C); sst\_range = mean annual SST range (°C).