Supplementary Material

# Supplementary Figures Captions

# SUPPLEMENTARY FIGURE 1. The biplot shows the simulated mixing with the positions of the coral samples (black dots) and the average signatures of the five sources selected for the mixing model (white crosses). Probability contours are at the 5% level (outermost contour) and at every 10% level, following the colors shown in the legend in the right part of the graph.



# SUPPLEMENTARY FIGURE 2. Simmr model output. Prior and posterior distributions at T0 (column on the left) and at Tf for (A) *D. pertusum*, (B) *M. oculata* and (C) *D. cornigera*.



# Supplementary Tables

**SUPPLEMENTARY TABLE 1.** Environmental data from the collection sites of the three species of CWCs used for this experiment. Geographical coordinates are referred to WGS84.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Species** | **Latitude** | **Longitude** | **Depth (m)** | **Temperature (°C)** | **Salinity (PSU)** |
| *Desmophyllum pertusum* | 41.294 N | 17.130 E | 244 | 13.83 | 38.70 |
| *Madrepora oculata* | 41.287 N | 17.278 E | 400 | 13.96 | 38.72 |
| *Dendrophyllia cornigera* | 38.799 N | 16.681 E | 139 | 13.56 | 37.50 |

**SUPPLEMENTARY TABLE 2.** Feeding rates of the three CWC species considered in this experiment, reported in literature. nd = not determined. SD= standard deviation; SE= standard error.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SPECIES** | **PREY** | **CAPTURE RATE** | **ASSUMED C** | **TEMPERATURE** | **FLOW VELOCITY** | **Reference** |
| **ind polyp-1 h-1** | **µg C polyp-1 h-1** | **°C** | **cm s-1** |
| *D. pertusum* | *Mysis* sp. | 0.004 ± 2 × 10-4 (SE) | 14.2 ± 7.12 (SD) | 13 | 5-10 | present study |
| *D. pertusum* | adults of *A. salina* | 7.8 ± 2.5 (SD) | 3269 ± 1042 (SD) | 12 | ~1 | Tsounis et al., 2010 |
| *D. pertusum* | Copepods | n.d. | 250.4 ± 79.5 / 126.3 ± 32.6 (SD) | 8 | 2 / 10 | Orejas et al., 2016 |
|  |  |  |  |  |  |  |
| *D. pertusum* | nauplii of *A. salina* | 3.6 ± 1.8 (SE) | 0.8 ± 0.44 (SD) | 13 | 5-10 | present study |
| *D. pertusum* | nauplii of *A. salina* | 283.7 ± 130.1 (SD) | 462 ± 212 (SD) | 12 | ~1 | Tsounis et al., 2010 |
| *D. pertusum* | nauplii of *A. salina* | 16.2 ± 2.1 / 11.4 ± 0.6 (SD) | 14.6 ± 1.9 / 10.3 ± 0.6 (SD) | 8 | 2 / 5 | Purser et al., 2010 |
|  |  |  |  |  |  |  |
| *D. pertusum* | *Brachionus* spp. | 3.7 ± 2 (SE) | 0.3 ± 0.17 (SD) | 13 | 5-10 | present study |
|  |  |  |  |  |  |  |
| *D. pertusum* | *Tetraselmis* sp. | 3.2 ± 0.7 ×103 (SE) | 0.7 ± 0.16 (SD) | 13 | 5-10 | present study |
| *D. pertusum* | *Skeletonema marinnoii* | n.d. | 798.4 ± 343 / −264.3 ± 158.4 (SD) | 8 | 2 / 10 | Orejas et al., 2016 |
|  |  |  |  |  |  |  |
| *M. oculata* | *Mysis* sp. | 0.001 ± 2 × 10-4 (SE) | 3.6 ± 0.71 (SD) | 13 | 5-10 | present study |
| *M. oculata* | adults of *A. salina* | 2.4 ± 2.3 (SD) | 994 ± 996 (SD) | 12 | ~1 | Tsounis et al., 2010 |
|  |  |  |  |  |  |  |
| *M. oculata* | nauplii of *A. salina* | 1 ± 0.3 (SE) | 0.2 ± 0.07 (SD) | 13 | 5-10 | present study |
| *M. oculata* | nauplii of *A. salina* | 47.9 ± 33.3 (SD) | 78.1 ± 54.3 (SD) | 12 | ~1 | Tsounis et al., 2010 |
|  |  |  |  |  |  |  |
| *M. oculata* | *Brachionus* spp. | 2.1 ± 0.7 (SE) | 0.2 ± 0.06 (SD) | 13 | 5-10 | present study |
|  |  |  |  |  |  |  |
| *M. oculata* | *Tetraselmis* sp. | 9.8 ± 2.6 × 103 (SE) | 0.2 ± 0.05 (SD) | 13 | 5-10 | present study |
|  |  |  |  |  |  |  |
| *D. cornigera* | *Mysis* sp. | 0.2 ± 0.01 (SE) | 783.2 ± 35.6 (SD) | 13 | 5-10 | present study |
| *D. cornigera* | adults of *A. salina* | 5.3 ± 1.5 (SD) | 2225 ± 632 (SD) | 12 | ~1 | Tsounis et al., 2010 |
| *D. cornigera* | adults of *A. salina* | 160 ± 70 (SD) | nd | 16 | 10 | Gori et al., 2015 |
|  |  |  |  |  |  |  |
| *D. cornigera* | nauplii of *A. salina* | 2 × 103 ± 53 (SE) | 47.2 ± 12.60 (SD) | 13 | 5-10 | present study |
| *D. cornigera* | nauplii of *A. salina* | 33.3 ± 25.1 (SD) | 189 ± 41 (SD) | 12 | ~1 | Tsounis et al., 2010 |
| *D. cornigera* | nauplii of *A. salina* | 889 ± 250 (SD) | nd | 16 | 5 | Gori et al., 2015 |
|  |  |  |  |  |  |  |
| *D. cornigera* | *Brachionus* spp. | 1.6 × 103 ± 5.6 × 102 (SE) | 13.9 ± 4.85 (SD) | 13 | 5-10 | present study |
|  |  |  |  |  |  |  |
| *D. cornigera* | *Tetraselmis* sp. | 4.8 ± 1.9 ×104 (SE) | 10 ± 3.89 (SD) | 13 | 5-10 | present study |