Supplementary table S1. Number of grids surveyed and used for analyses at each year for all sites and locations (ND = No Data, sites not surveyed that year).

| Site               | Depth | 2010 | 2011 | 2012 | 2013 | 2014 | 2017 |
|--------------------|-------|------|------|------|------|------|------|
| **Abrolhos Islands** |       |      |      |      |      |      |      |
| Geebank            | 15 m  | 3    | 3    | 3    | 3    | 3    | 3    |
|                    | 25 m  | 3    | 3    | 3    | 2    | 2    | 3    |
| Coral Patches      | 15 m  | 3    | 2    | 3    | 3    | 3    | ND   |
|                    | 40 m  | 3    | ND   | 3    | 3    | 1    | 3    |
| Snapper Bank       | 25 m  | ND   | 3    | 3    | 3    | 3    | 3    |
| **Jurien Bay**     |       |      |      |      |      |      |      |
| North              | 15 m  | 3    | 2    | 2    | 3    | ND   | ND   |
|                    | 25 m  | 3    | 2    | 2    | 3    | ND   | ND   |
|                    | 40 m  | 3    | 3    | 3    | ND   | ND   | ND   |
| South              | 40 m  | 3    | 3    | 3    | 3    | ND   | ND   |
| New                | 25 m  | ND   | 3    | 3    | ND   | ND   | ND   |
| **Rottnest Island**|       |      |      |      |      |      |      |
| North              | 15 m  | 3    | 3    | 3    | 3    | ND   | 3    |
|                    | 25 m  | 3    | 2    | 2    | 3    | ND   | 3    |
|                    | 40 m  | 3    | 2    | 2    | 3    | ND   | 3    |
| South              | 15 m  | 3    | 2    | 2    | 3    | ND   | 3    |
|                    | 25 m  | 3    | 3    | 3    | 3    | ND   | 3    |
|                    | 40 m  | 3    | 2    | 2    | 2    | ND   | 2    |
Supplementary figure S1. Mean percent cover (± SE) of sand at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.
Supplementary figure S2: Mean percent cover (± SE) of unbleached coral (a) and bleached coral (b) at each depth at Houtman Abrolhos Islands, WA. The grey box highlights 2011, the year of the marine heatwave. The estimates of percent cover are means of ~90 to 180 images within each depth per year.
Supplementary figure S3. Mean percent cover (± SE) of turf at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

Supplementary figure S4. Mean percent cover (± SE) of fine branching red algae at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

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**Supplementary figure S5.** Mean percent cover (± SE) of Foliose Coral at each depth at Houtman Abrolhos Islands, WA. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

**Supplementary figure S6.** Mean percent cover (± SE) of encrusting red algae at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.
Supplementary figure S7. Mean percent cover (± SE) of *Ecklonia radiata* at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

Supplementary figure S8. Mean percent cover (± SE) of *Sargassum sp.* at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.
Supplementary figure S9. Mean percent cover (± SE) of seagrass at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

Supplementary figure S10. Mean percent cover (± SE) of Scytophialia dorycarpa at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.
Supplementary figure S11. Mean percent cover (± SE) of sponges at each depth and location from 2010 - 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

Supplementary figure S12. Mean percent cover (± SE) of staghorn coral at each depth and location from 2010 – 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.
Supplementary figure S13. Mean percent cover (± SE) of tabulate coral at each depth and location from 2010 – 2017. The estimates of percent cover are means of ~ 90 to 180 images within each depth per year.

Supplementary table S2. Summary statistics of one-way ANOVA to test for the effect of year in the percent cover of *E. radiata*, turf, encrusting red algae and *S. dorycarpa*, at each depth and location. Values in bold show significant differences between treatment plots. Values marked with * denote non-parametric tests (Kruskal-Wallis chi-squared values). Tukey tests were performed when ANOVAs were significant, and Dunn’s test when Kruskal-Wallis tests were significant.

| Class                   | Location | Depth | df | F-value | p-value | Post-hoc |
|-------------------------|----------|-------|----|---------|---------|----------|
| *Ecklonia radiata*      | Abrolhos | 15 m  | 2  | 0.29732 | *       | 0.8619   |
|                         |          | 25 m  | 2  | 0.725   |         |          |
|                         |          | 40 m  | 2  | 2.343   |         | 0.158    |
|                         | Jurien   | 15 m  | 2  | 0.45226 | *       | 0.7976   |
|                         |          | 25 m  | 2  | 0.023   |         | 0.978    |
|                         |          | 40 m  | 2  | 0.0042  | *       | 0.9979   |
|                         | Rottnest | 15 m  | 2  | 1.131   |         | 0.351    |
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Supplementary table S3. Univariate PERMANOVA to test for percent cover differences of main benthic categories between depths and years at each location. PERMANOVA derived from square root transformation and Euclidian distance similarity matrices.

| Benthic category | Location | Effects | Numerator df | Denominator df | Pseudo-F | p       | Unique permutations |
|------------------|----------|---------|---------------|----------------|-----------|---------|---------------------|
| **Coral**        | Abrolhos | Year    | 5             | 2413           | 5.09      | 0.0002  | 9963                |
|                  |          | Depth^2 | 2             | 2413           | 622.48    | 0.0001  | 9945                |
|                  |          | Year x Depth | 9      | 2413           | 5.98      | 0.0001  | 9939                |
| **Bleached Coral** | Abrolhos | Year    | 5             | 2413           | 26.131    | 0.0001  | 9948                |
|                  |          | Depth^2 | 2             | 2413           | 33.299    | 0.0001  | 9947                |
|                  |          | Year x Depth | 9      | 2413           | 14.697    | 0.0001  | 9933                |
| **Coral-Staghorn** | Abrolhos | Year    | 5             | 2413           | 16.13     | 0.0001  | 9941                |
|                  |          | Depth   | 2             | 2413           | 335.11    | 0.0001  | 9948                |
|                  |          | Year x Depth | 9      | 2413           | 10.68     | 0.0001  | 9941                |
| **Coral-Foliose** | Abrolhos | Year    | 5             | 2413           | 2.26      | 0.0443  | 9925                |
|                  |          | Depth   | 2             | 2413           | 94.63     | 0.0001  | 9943                |
|                  |          | Year x Depth | 9      | 2413           | 4.14      | 0.0001  | 9926                |
| **Coral-Tabulate** | Abrolhos | Year    | 5             | 2413           | 3.13      | 0.0072  | 9951                |
|                  |          | Depth   | 2             | 2413           | 343.65    | 0.0001  | 9953                |
|                  |          | Year x Depth | 9      | 2413           | 3.27      | 0.0006  | 9931                |
| **Macroalgae**   | Abrolhos | Year    | 5             | 2413           | 25.329    | 0.0001  | 9840                |
|                  |          | Depth   | 2             | 2413           | 116.37    | 0.0001  | 9941                |

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|                | Year | Depth | Year x Depth | Depth | Year x Depth | Depth | Year x Depth | Depth |
|----------------|------|-------|--------------|-------|--------------|-------|--------------|-------|
| *Rottnest*     |      |       |              |       |              |       |              |       |
|                | 9    | 2413  | 14.87        | 0.0001| 9838         |
| *Jurien*       |      |       |              |       |              |       |              |       |
|                | 3    | 1548  | 69.04        | 0.0001| 9936         |
| *Macroalgae -* |      |       |              |       |              |       |              |       |
| *Ecklonia*     |      |       |              |       |              |       |              |       |
| Abrolhos       | 5    | 2413  | 19.808       | 0.0001| 9952         |
|                | 2    | 2413  | 62.225       | 0.0001| 9940         |
|                | 9    | 2413  | 8.821        | 0.0001| 9947         |
| *Rottnest*     |      |       |              |       |              |       |              |       |
|                | 4    | 2355  | 1.2873       | 0.2763| 9958         |
| *Jurien*       |      |       |              |       |              |       |              |       |
|                | 3    | 1548  | 4.865        | 0.002 | 9942         |
| *Macroalgae -* |      |       |              |       |              |       |              |       |
| *Sargassum*    |      |       |              |       |              |       |              |       |
| Abrolhos       | 5    | 2413  | 5.419        | 0.0001| 9953         |
|                | 2    | 2413  | 77.164       | 0.0001| 9955         |
|                | 9    | 2413  | 3.820        | 0.0003| 9948         |
| *Rottnest*     |      |       |              |       |              |       |              |       |
|                | 4    | 2355  | 36.549       | 0.0001| 9958         |
| *Macroalgae -* |      |       |              |       |              |       |              |       |
| *Turf*         |      |       |              |       |              |       |              |       |
| Abrolhos       | 5    | 2413  | 34.008       | 0.0001| 9947         |
|                | 2    | 2413  | 125.68       | 0.0001| 9954         |

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|               | Year x Depth | Depth | Year x Depth | Depth | Depth | Year x Depth | Depth | Year x Depth | Depth | Depth | Year x Depth | Depth |
|---------------|--------------|-------|--------------|-------|-------|--------------|-------|--------------|-------|-------|--------------|-------|
| **Rottnest**  | 4            | 2355  | 7.973        | 0.0001| 9954  |
|               | 2            | 2355  | 0.580        | 0.5566| 9950  |
|               | 8            | 2355  | 4.956        | 0.0001| 9926  |
| **Jurien**    | 3            | 1548  | 64.997       | 0.0001| 9940  |
|               | 2            | 1548  | 49.855       | 0.0001| 9944  |
|               | 6            | 1548  | 83.203       | 0.0001| 9943  |
| **Macroalgae – Fine branching red** | **Abrolhos** | 5 | 2413 | 46.374 | 0.0001 | 9948 |
|               | 2            | 2413  | 182.78       | 0.0001| 9949  |
|               | 9            | 2413  | 16.015       | 0.0001| 9941  |
| **Rottnest**  | 4            | 2355  | 18.362       | 0.0001| 9957  |
|               | 2            | 2355  | 8.238        | 0.0002| 9947  |
|               | 8            | 2355  | 8.959        | 0.0001| 9940  |
| **Jurien**    | 3            | 1548  | 39.354       | 0.0001| 9952  |
|               | 2            | 1548  | 67.283       | 0.0001| 9954  |
|               | 6            | 1548  | 17.338       | 0.0001| 9935  |
| **Macroalgae – Encrusting red** | **Abrolhos** | 5 | 2413 | 45.266 | 0.0001 | 9956 |
|               | 2            | 2413  | 70.205       | 0.0001| 9946  |
|               | 9            | 2413  | 21.739       | 0.0001| 9919  |
| **Rottnest**  | 4            | 2355  | 7.499        | 0.0001| 9933  |
|               | 2            | 2355  | 5.726        | 0.0034| 9948  |
|               | 8            | 2355  | 4.596        | 0.0001| 9935  |
| **Jurien**    | 3            | 1548  | 39.292       | 0.0001| 9954  |

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|                          | Depth | Year x Depth | Depth | Year x Depth | Depth | Year x Depth |  |  
|--------------------------|-------|--------------|-------|--------------|-------|--------------|  |  
| **Macroalgae - Scytothalia** |       |              |       |              |       |              |  |  
| Rottnest                 |       |              |       |              |       |              |  |  
|                          | 2     | 1548         | 643.85| **0.0001**   | 9960  |              |  |  
|                          | 6     | 1548         | 14.646| **0.0001**   | 9936  |              |  |  
| **Macroalgae – Canopy**  |       |              |       |              |       |              |  |  
| Abrolhos                 |       |              |       |              |       |              |  |  
|                          | 2     | 2355         | 5.664 | **0.037**    | 9955  |              |  |  
|                          | 2     | 2355         | 8.291 | **0.0001**   | 9942  |              |  |  
|                          | 2     | 2355         | 11.552| **0.0001**   | 9949  |              |  |  
|                          | 2     | 2413         | 88.42 | **0.0001**   | 9953  |              |  |  
|                          | 9     | 2413         | 7.085 | **0.0001**   | 9947  |              |  |  
| **Jurien**               |       |              |       |              |       |              |  |  
|                          | 2     | 1548         | 45.512| **0.0001**   | 9952  |              |  |  
|                          | 6     | 1548         | 22.252| **0.0001**   | 9954  |              |  |  
| **Seagrass**             |       |              |       |              |       |              |  |  
| Abrolhos                 |       |              |       |              |       |              |  |  
|                          | 2     | 2413         | 31.811| **0.0001**   | 9959  |              |  |  
|                          | 9     | 2413         | 3.675 | **0.0003**   | 9940  |              |  |  
| **Jurien**               |       |              |       |              |       |              |  |  
|                          | 2     | 1548         | 6.587 | **0.0003**   | 9948  |              |  |  
|                          | 6     | 1548         | 22.252| **0.0001**   | 9952  |              |  |  
| **Sponges**              |       |              |       |              |       |              |  |  
| Abrolhos                 |       |              |       |              |       |              |  |  
|                          | 2     | 2413         | 108.89| **0.0001**   | 9964  |              |  |  
|                          | 9     | 2413         | 11.53 | **0.0001**   | 9931  |              |  |  
| **Rottnest**             |       |              |       |              |       |              |  |  
|                          | 2     | 2355         | 129.99| **0.0001**   | 9954  |              |  |  
|                          | 2     | 2355         | 129.99| **0.0001**   | 9954  |              |  |  

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Supplementary figure S14. Temperature data series (in degrees Celsius) for the yearly summer (December – April) averages (a), and yearly anomalies (b) at each location and for average depth of 10 m (5-15 m range), 30 m (25–35 m depth range) and 40 m (35–45 m depth range). Anomalies calculated over the 20-year period averages. The grey line highlights 2011, the year of the marine heatwave. Temperature data was used to identify the temperature signal of the marine heatwave at each of the locations and across the three target depths. Data was gathered from the Australian Shelf Temperature Data Atlas which groups temperature data collected from 1995 to 2014 from a range of sources including AUV deployments, Argo profiles, glider deployments, moorings, and CTD casts (Integrated Marine Observing System, 2015). Data within a 30 km radius from the study locations was selected for the analysis (see electronic supplementary tables S4-S6 for details of temperature data). The average temperature for the summer months (December – April) was calculated for each year (1995-2014) at each location and depth. Temperature data was not available for all years and months for Abrolhos and Jurien Bay, yet, the average summer temperature was calculated over the 20-year period and temperature anomalies were calculated over this average.
Supplementary table S4. Summer average temperatures in degrees Celsius (± standard error) for each location at three depth bins 10, 30 and 40 m from 1995 to 2015 (Integrated Marine Observing System, 2015). Depth bins group data from a range of depths so that 10 m bin include 5-15 m, the 30 m bin include 25-35 m and the 40 m bin includes 35-45 m of depth. Summer months included the temperatures from December to April. The standard error of some temperatures was not calculated due to lack of data (one or 2 observations only). ND indicates that there is no data available for that location and depth.

| Year | Location | 10 m                | 30 m                | 40 m                |
|------|----------|---------------------|---------------------|---------------------|
| 1995 | Abrolhos | 25.286 ± 0.064      | 25.298 ± 0.052      | 25.267 ± 0.033      |
| 1996 | Abrolhos | 22.96 ± 0.257       | 22.916 ± 0.286      | 22.739 ± 0.361      |
| 1997 | Abrolhos | ND                  | ND                  | ND                  |
| 1998 | Abrolhos | ND                  | ND                  | ND                  |
| 1999 | Abrolhos | 22.346              | 22.237              | 22.147              |
| 2000 | Abrolhos | ND                  | ND                  | ND                  |
| 2001 | Abrolhos | ND                  | ND                  | ND                  |
| 2002 | Abrolhos | ND                  | ND                  | ND                  |
| 2003 | Abrolhos | ND                  | ND                  | ND                  |
| 2004 | Abrolhos | ND                  | ND                  | ND                  |
| 2005 | Abrolhos | 20.574              | 20.575              | 20.569              |
| 2006 | Abrolhos | ND                  | ND                  | ND                  |
| 2007 | Abrolhos | ND                  | ND                  | ND                  |
| Year | Area     | ND  | ND  | ND  |
|------|----------|-----|-----|-----|
| 2008 | Abrolhos | ND  | ND  | ND  |
| 2009 | Abrolhos | ND  | ND  | ND  |
| 2010 | Abrolhos | 22.537 | 22.151 | 22.007 |
| 2011 | Abrolhos | 25.008 | 25.024 | ND  |
| 2012 | Abrolhos | 24.067 | 23.833 | ND  |
| 2013 | Abrolhos | 23.705 | 23.551 | 23.138 |
| 2014 | Abrolhos | 23.193 ± 0.09 | 23.16 ± 0.074 | 23.106 ± 0.064 |
| 1995 | Jurien   | ND  | ND  | ND  |
| 1996 | Jurien   | 22.127 ± 0.199 | 22.014 ± 0.22 | 21.847 ± 0.278 |
| 1997 | Jurien   | ND  | ND  | ND  |
| 1998 | Jurien   | ND  | ND  | ND  |
| 1999 | Jurien   | 21.734 | 21.629 | 20.905 |
| 2000 | Jurien   | ND  | ND  | ND  |
| 2001 | Jurien   | 21.762 | ND  | 21.388 |
| 2002 | Jurien   | ND  | ND  | ND  |
| 2003 | Jurien   | ND  | ND  | ND  |
| 2004 | Jurien   | ND  | ND  | ND  |
| 2005 | Jurien   | 23.011 | 22.984 | 22.976 |
| 2006 | Jurien   | ND  | ND  | ND  |
| 2007 | Jurien   | ND  | ND  | ND  |
| 2008 | Jurien   | ND  | ND  | ND  |
| 2009 | Jurien   | ND  | ND  | ND  |
| 2010 | Jurien   | 21.653 ± 0.695 | 21.801 ± 0.12 | 21.632 ± 0.31 |
| 2011 | Jurien   | 24.459 ± 0.342 | 24.201 ± 0.333 | 23.934 ± 0.181 |
| 2012 | Jurien   | 23.31 ± 0.23 | 23.622 ± 0.151 | 23.63 ± 0.166 |
| 2013 | Jurien   | 23.507 ± 0.21 | 23.562 ± 0.219 | 23.557 ± 0.136 |
| 2014 | Jurien   | 22.986 ± 0.247 | 22.802 ± 0.255 | 22.717 ± 0.298 |
| 1995 | Rottnest | 21.547 ± 0.418 | 21.626 ± 0.422 | 21.537 ± 0.416 |
| 1996 | Rottnest | 22.599 ± 0.245 | 22.502 ± 0.239 | 22.498 ± 0.245 |
| 1997 | Rottnest | 22.288 ± 0.413 | 22.114 ± 0.42 | 22 ± 0.469 |
| 1998 | Rottnest | 22.142 ± 0.25 | 22.026 ± 0.275 | 21.931 ± 0.288 |
| 1999 | Rottnest | 23.141 ± 0.287 | 23.064 ± 0.298 | 22.994 ± 0.296 |
| 2000 | Rottnest | 22.165 ± 0.402 | 22.121 ± 0.455 | 21.928 ± 0.515 |
| 2001 | Rottnest | 21.609 ± 0.169 | 21.537 ± 0.159 | 21.642 ± 0.195 |
| 2002 | Rottnest | 21.505 | 21.486 | 21.409 |
| 2003 | Rottnest | 19.413 ± 0.167 | 19.238 ± 0.282 | 19.162 ± 0.36 |
| 2004 | Rottnest | 21.53 ± 0.272 | 21.202 ± 0.167 | 21.078 ± 0.139 |
| 2005 | Rottnest | 20.258 ± 0.366 | 19.937 ± 0.275 | 19.792 ± 0.223 |
| 2006 | Rottnest | 22.177 ± 0.407 | 21.937 ± 0.343 | 21.838 ± 0.305 |
| 2007 | Rottnest | 21.865 | 21.813 | 21.754 |
| 2008 | Rottnest | 22.201 ± 0.845 | 21.497 ± 0.81 | 21.314 ± 0.835 |
| 2009 | Rottnest | 21.95 ± 0.114 | 21.603 ± 0.162 | 21.528 ± 0.174 |
| 2010 | Rottnest | 21.74 ± 0.211 | 21.207 ± 0.221 | 21.023 ± 0.243 |
| 2011 | Rottnest | 23.961 ± 0.184 | 23.585 ± 0.225 | 23.447 ± 0.232 |
| 2012 | Rottnest | 23.159 ± 0.28 | 22.807 ± 0.254 | 22.685 ± 0.255 |
| 2013 | Rottnest | 23.05 ± 0.144 | 22.594 ± 0.173 | 22.332 ± 0.2 |
| 2014 | Rottnest | 21.681 ± 0.3 | 21.382 ± 0.314 | 21.171 ± 0.331 |
| 2015 | Rottnest | ND  | ND  | 19.473 |

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Supplementary table S5. Summer temperatures anomalies in degrees Celsius for each location at three depth bins 10, 30 and 40 m from 1995 to 2015 (Integrated Marine Observing System, 2015). Depth bins group data from a range of depths so that 10 m bin include 5-15 m, the 30 m bin include 25-35 m and the 40 m bin includes 35-45 m of depth. Summer months included the temperatures from December to April. ND indicates that there is no data available for that location and depth.

| Year | Location | 15 m Anomaly | 25 m Anomaly | 40 m Anomaly |
|------|----------|--------------|--------------|--------------|
| 1995 | Abrolhos  | 1.989        | 2.104        | 2.557        |
| 1996 | Abrolhos  | -0.338       | -0.278       | 0.029        |
| 1997 | Abrolhos  | ND           | ND           | ND           |
| 1998 | Abrolhos  | ND           | ND           | ND           |
| 1999 | Abrolhos  | -0.952       | -0.957       | -0.563       |
| 2000 | Abrolhos  | ND           | ND           | ND           |
| 2001 | Abrolhos  | ND           | ND           | ND           |
| 2002 | Abrolhos  | ND           | ND           | ND           |
| 2003 | Abrolhos  | ND           | ND           | ND           |
| 2004 | Abrolhos  | ND           | ND           | ND           |
| 2005 | Abrolhos  | -2.723       | -2.619       | -2.142       |
| 2006 | Abrolhos  | ND           | ND           | ND           |
| 2007 | Abrolhos  | ND           | ND           | ND           |
| 2008 | Abrolhos  | ND           | ND           | ND           |
| 2009 | Abrolhos  | ND           | ND           | ND           |
| 2010 | Abrolhos  | -0.760       | -1.043       | -0.703       |
| 2011 | Abrolhos  | 1.710        | 1.830        | ND           |
| 2012 | Abrolhos  | 0.769        | 0.639        | ND           |
| 2013 | Abrolhos  | 0.408        | 0.357        | 0.427        |
| 2014 | Abrolhos  | -0.104       | -0.034       | 0.395        |
| 1995 | Jurien    | ND           | ND           | ND           |
| 1996 | Jurien    | -0.600       | -0.652       | -0.662       |
| 1997 | Jurien    | ND           | ND           | ND           |
| 1998 | Jurien    | ND           | ND           | ND           |
| 1999 | Jurien    | -0.994       | -1.038       | -1.605       |
| 2000 | Jurien    | ND           | ND           | ND           |
| 2001 | Jurien    | -0.966       | -1.287       | -1.121       |
| 2002 | Jurien    | ND           | ND           | ND           |
| 2003 | Jurien    | ND           | ND           | ND           |
| 2004 | Jurien    | ND           | ND           | ND           |
| 2005 | Jurien    | 0.283        | 0.318        | 0.467        |
| 2006 | Jurien    | ND           | ND           | ND           |
| 2007 | Jurien    | ND           | ND           | ND           |
| 2008 | Jurien    | ND           | ND           | ND           |
| 2009 | Jurien    | ND           | ND           | ND           |
| 2010 | Jurien    | -1.074       | -0.865       | -0.878       |
| 2011 | Jurien    | 1.731        | 1.535        | 1.424        |

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Supplementary table S6. Number of data points obtained to calculated averages, and anomalies of temperature at each year location and depth.

| Depth | Year | Abrolhos | Jurien | Rottnest |
|-------|------|----------|--------|----------|
| 15 m  | 1995 | 2        | 0      | 10       |
|       | 1996 | 7        | 8      | 13       |
|       | 1997 | 0        | 0      | 8        |
|       | 1998 | 0        | 0      | 14       |
|       | 1999 | 1        | 1      | 11       |
|       | 2000 | 1        | 1      | 15       |
|       | 2001 | 0        | 1      | 12       |
|       | 2002 | 0        | 1      | 2        |
|       | 2003 | 0        | 0      | 9        |
|       | 2004 | 0        | 0      | 9        |
|       | 2005 | 1        | 1      | 9        |
|       | 2006 | 0        | 0      | 11       |
|       | 2007 | 0        | 0      | 5        |
|       | 2008 | 0        | 0      | 8        |
|       | 2009 | 0        | 0      | 22       |
|       | 2010 | 1        | 3      | 16       |
|       | 2011 | 1        | 3      | 20       |
Depth moderate loss of marine foundation species after an extreme marine heatwave: Could deep temperate reefs act as refuge?

| Year | 25 m | 40 m |
|------|------|------|
| 2012 | 1    | 3    |
| 2013 | 4    | 4    |
| 2014 | 0    | 0    |
| 1995 | 2    | 0    |
| 1996 | 7    | 8    |
| 1997 | 0    | 0    |
| 1998 | 0    | 0    |
| 1999 | 1    | 1    |
| 2000 | 1    | 1    |
| 2001 | 0    | 0    |
| 2002 | 0    | 0    |
| 2003 | 0    | 0    |
| 2004 | 0    | 0    |
| 2005 | 1    | 1    |
| 2006 | 0    | 0    |
| 2007 | 0    | 0    |
| 2008 | 0    | 0    |
| 2009 | 0    | 0    |
| 2010 | 1    | 4    |
| 2011 | 1    | 3    |
| 2012 | 1    | 3    |
| 2013 | 1    | 2    |
| 2014 | 4    | 4    |
| 2015 | 0    | 0    |
| 1995 | 2    | 0    |
| 1996 | 6    | 8    |
| 1997 | 0    | 0    |
| 1998 | 0    | 0    |
| 1999 | 1    | 1    |
| 2000 | 1    | 1    |
| 2001 | 0    | 1    |
| 2002 | 0    | 1    |
| 2003 | 0    | 0    |
| 2004 | 0    | 0    |
| 2005 | 1    | 1    |
| 2006 | 0    | 0    |
| 2007 | 0    | 0    |
| 2008 | 0    | 0    |
| 2009 | 0    | 0    |
| 2010 | 1    | 3    |
| 2011 | 0    | 2    |
| 2012 | 0    | 2    |
| 2013 | 1    | 3    |
| 2014 | 3    | 4    |
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