Table 1: Coefficients for Time Series Models of Change by Depth

Ordered Beta Regression where proportion ~ centered year \* depth + (1|Subsite)

|  | estimate | std.error | conf.low | conf.high |
| --- | --- | --- | --- | --- |
| Alcyonium siderium, R2 = 0.456 | | | | |
| (Intercept) | -2.169 | 1.210 | -4.603 | 0.286 |
| Alcyonium siderium, R2 = NA | | | | |
| year\_cent | -0.089 | 0.014 | -0.117 | -0.060 |
| depthMid | -3.217 | 1.493 | -6.406 | -0.273 |
| depthShallow | -3.185 | 1.646 | -6.684 | -0.007 |
| year\_cent:depthMid | 0.026 | 0.022 | -0.016 | 0.070 |
| year\_cent:depthShallow | 0.184 | 0.053 | 0.085 | 0.296 |
| sd\_\_(Intercept) | 1.795 | 0.637 | 0.903 | 3.361 |
| Balanus and Amphibalanus spp., R2 = 0.197 | | | | |
| (Intercept) | -4.859 | 0.399 | -5.669 | -4.031 |
| Balanus and Amphibalanus spp., R2 = NA | | | | |
| year\_cent | -0.016 | 0.016 | -0.047 | 0.016 |
| depthMid | -0.858 | 0.525 | -2.129 | 0.069 |
| depthShallow | -0.485 | 0.553 | -1.719 | 0.593 |
| year\_cent:depthMid | 0.006 | 0.027 | -0.048 | 0.059 |
| year\_cent:depthShallow | 0.090 | 0.045 | 0.004 | 0.179 |
| sd\_\_(Intercept) | 0.402 | 0.290 | 0.020 | 1.103 |
| Botrylloides violaceus, R2 = 0.261 | | | | |
| (Intercept) | -5.254 | 2.444 | -10.704 | -0.742 |
| Botrylloides violaceus, R2 = NA | | | | |
| year\_cent | 0.024 | 0.019 | -0.013 | 0.062 |
| depthMid | -3.952 | 3.172 | -10.802 | 2.281 |
| depthShallow | -3.875 | 3.382 | -10.959 | 2.688 |
| year\_cent:depthMid | 0.022 | 0.034 | -0.044 | 0.088 |
| year\_cent:depthShallow | 0.129 | 0.069 | 0.001 | 0.274 |
| sd\_\_(Intercept) | 3.565 | 1.614 | 1.466 | 7.764 |
| Crustose Coralline Algae pink, R2 = 0.165 | | | | |
| (Intercept) | -0.722 | 1.240 | -3.179 | 1.833 |
| Crustose Coralline Algae pink, R2 = NA | | | | |
| year\_cent | -0.010 | 0.018 | -0.045 | 0.025 |
| depthMid | 0.368 | 1.418 | -2.553 | 3.134 |
| depthShallow | 0.153 | 1.617 | -3.215 | 3.328 |
| year\_cent:depthMid | -0.020 | 0.023 | -0.063 | 0.024 |
| year\_cent:depthShallow | 0.043 | 0.027 | -0.011 | 0.097 |
| sd\_\_(Intercept) | 1.692 | 0.548 | 0.956 | 3.071 |
| Didemnum vexillum, R2 = 0.223 | | | | |
| (Intercept) | -4.094 | 0.546 | -5.196 | -3.000 |
| Didemnum vexillum, R2 = NA | | | | |
| year\_cent | -0.052 | 0.018 | -0.085 | -0.017 |
| depthMid | -0.727 | 0.665 | -2.068 | 0.556 |
| depthShallow | 0.332 | 0.688 | -1.165 | 1.690 |
| year\_cent:depthMid | 0.027 | 0.036 | -0.042 | 0.096 |
| year\_cent:depthShallow | -0.004 | 0.029 | -0.061 | 0.055 |
| sd\_\_(Intercept) | 0.614 | 0.302 | 0.133 | 1.341 |
| Ectopleura spp., R2 = 0.227 | | | | |
| (Intercept) | -4.853 | 1.197 | -7.678 | -2.780 |
| Ectopleura spp., R2 = NA | | | | |
| year\_cent | 0.016 | 0.038 | -0.057 | 0.095 |
| depthMid | 0.183 | 1.362 | -2.647 | 2.985 |
| depthShallow | 2.413 | 1.450 | -0.193 | 5.894 |
| year\_cent:depthMid | 0.028 | 0.052 | -0.076 | 0.131 |
| year\_cent:depthShallow | -0.027 | 0.046 | -0.119 | 0.062 |
| sd\_\_(Intercept) | 1.266 | 0.716 | 0.339 | 3.176 |
| Hydrozoa-Bryozoa complex, R2 = 0.223 | | | | |
| (Intercept) | -0.296 | 0.970 | -2.295 | 1.651 |
| Hydrozoa-Bryozoa complex, R2 = NA | | | | |
| year\_cent | 0.054 | 0.021 | 0.014 | 0.097 |
| depthMid | 0.013 | 1.134 | -2.250 | 2.448 |
| depthShallow | -0.676 | 1.241 | -3.172 | 1.814 |
| year\_cent:depthMid | 0.016 | 0.027 | -0.039 | 0.068 |
| year\_cent:depthShallow | -0.065 | 0.032 | -0.129 | -0.001 |
| sd\_\_(Intercept) | 1.246 | 0.420 | 0.656 | 2.315 |
| Isodictya spp., R2 = 0.215 | | | | |
| (Intercept) | -5.238 | 0.363 | -5.977 | -4.516 |
| Isodictya spp., R2 = NA | | | | |
| year\_cent | -0.025 | 0.020 | -0.065 | 0.016 |
| depthMid | 0.167 | 0.424 | -0.681 | 0.997 |
| depthShallow | -0.463 | 0.464 | -1.421 | 0.432 |
| year\_cent:depthMid | 0.056 | 0.029 | -0.001 | 0.112 |
| year\_cent:depthShallow | 0.081 | 0.039 | 0.005 | 0.159 |
| sd\_\_(Intercept) | 0.370 | 0.206 | 0.049 | 0.870 |
| Mytilus edulis, R2 = 0.138 | | | | |
| (Intercept) | -4.503 | 0.815 | -6.108 | -2.855 |
| Mytilus edulis, R2 = NA | | | | |
| year\_cent | 0.000 | 0.021 | -0.040 | 0.042 |
| depthMid | -0.700 | 1.000 | -2.783 | 1.021 |
| depthShallow | -0.236 | 1.035 | -2.390 | 1.802 |
| year\_cent:depthMid | -0.001 | 0.029 | -0.061 | 0.055 |
| year\_cent:depthShallow | -0.057 | 0.032 | -0.122 | 0.006 |
| sd\_\_(Intercept) | 1.007 | 0.485 | 0.338 | 2.262 |
| Unidentified red fleshy crust, R2 = 0.132 | | | | |
| (Intercept) | -2.033 | 0.335 | -2.713 | -1.366 |
| Unidentified red fleshy crust, R2 = NA | | | | |
| year\_cent | -0.038 | 0.016 | -0.069 | -0.006 |
| depthMid | -0.104 | 0.393 | -0.920 | 0.681 |
| depthShallow | 0.257 | 0.453 | -0.638 | 1.205 |
| year\_cent:depthMid | -0.016 | 0.022 | -0.058 | 0.028 |
| year\_cent:depthShallow | 0.001 | 0.030 | -0.057 | 0.059 |
| sd\_\_(Intercept) | 0.335 | 0.213 | 0.021 | 0.826 |