|  |  | **Warming** |  |  | **Cooling** |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Taxon** | **Lower CI** | **Estimate** | **Upper CI** | **Lower CI** | **Estimate** | **Upper CI** |
| *Arthropoda* | 0.095 | 0.098 | 0.101 | 0.217 | 0.223 | 0.231 |
| *Bivalvia* | 0.016 | 0.018 | 0.019 | 0.144 | 0.159 | 0.174 |
| *Cnidaria* | -0.022 | -0.022 | -0.021 | -0.023 | -0.023 | -0.022 |
| *Echinodermata* | -0.015 | -0.013 | -0.011 | -0.029 | -0.027 | -0.025 |
| *Foraminifera* | 0.244 | 0.272 | 0.298 | 0.292 | 0.328 | 0.370 |
| *Gastropoda* | -0.011 | -0.009 | -0.007 | -0.012 | -0.010 | -0.008 |
| *Mammalia* | 0.223 | 0.224 | 0.225 | 0.394 | 0.396 | 0.396 |
| *Reptilia* | 0.118 | 0.123 | 0.124 | 0.100 | 0.102 | 0.108 |

| **# Observations** | **Mean** | | **Median** | |
| --- | --- | --- | --- | --- |
|  | warming | cooling | warming | cooling |
| 1000 | 0.002 | 0.001 | 0.000 | 0.000 |
| 2000 | 0.000 | -0.004 | -0.007 | -0.014 |
| 3000 | 0.003 | -0.003 | -0.003 | -0.006 |
| 4000 | 0.006 | 0.000 | 0.012 | 0.007 |
| 6000 | 0.005 | -0.001 | 0.002 | -0.001 |
| 8000 | 0.002 | -0.006 | -0.007 | -0.016 |
| 10000 | 0.003 | -0.005 | -0.006 | -0.014 |
| 20000 | 0.000 | -0.009 | -0.009 | -0.017 |
| 30000 | 0.001 | -0.007 | -0.008 | -0.017 |

| **Taxon** | **AIC** | | **BIC** | |
| --- | --- | --- | --- | --- |
|  | Trend only | Change & Trend | Trend only | Change & Trend |
| *Arthropoda* | 32889 | 31471 | 32930 | 31512 |
| *Bivalvia* | 8698 | 8645 | 8734 | 8682 |
| *Cnidaria* | 7766 | 7732 | 7802 | 7768 |
| *Echinodermata* | 4014 | 3981 | 4046 | 4013 |
| *Foraminifera* | 2518 | 2481 | 2547 | 2510 |
| *Gastropoda* | 6475 | 6441 | 6510 | 6476 |
| *Mammalia* | 2914 | 2965 | 2943 | 2994 |
| *Reptilia* | 5685 | 5543 | 5718 | 5575 |

| **Taxon** | **Durbin-Watson statistic** | |
| --- | --- | --- |
| *Arthropoda* | 1.95 |  |
| *Bivalvia* | 2.05 |  |
| *Cnidaria* | 1.92 |  |
| *Echinodermata* | 1.61 |  |
| *Foraminifera* | 1.99 |  |
| *Gastropoda* | 2.19 |  |
| *Mammalia* | 1.94 |  |
| *Reptilia* | 1.40 |  |

| **Taxon** | **# Genera** | **Median duration [myr]** | **Mean duration [myr]** |
| --- | --- | --- | --- |
| *Arthropoda* | 7761 | 7.35 | 15.95 |
| *Bivalvia* | 1448 | 25.27 | 43.96 |
| *Cnidaria* | 1319 | 24.50 | 39.44 |
| *Echinodermata* | 739 | 17.09 | 31.28 |
| *Foraminifera* | 488 | 14.00 | 25.07 |
| *Gastropoda* | 1076 | 24.00 | 43.04 |
| *Mammalia* | 778 | 7.35 | 9.64 |
| *Reptilia* | 1367 | 9.70 | 15.91 |

| **Taxon** | **Ttrend** | **Estimate** | **Std. Error** | **Pr(>|z|)** | **AIC** | **BIC** |
| --- | --- | --- | --- | --- | --- | --- |
| *Arthropoda* | trend.st2 | 1.50 | 0.05 | 0e+00 | 31471 | 31512 |
| *Bivalvia* | trend.st4 | 0.64 | 0.17 | 1e-04 | 8645 | 8682 |
| *Cnidaria* | trend.st4 | -0.88 | 0.13 | 0e+00 | 7732 | 7768 |
| *Echinodermata* | trend.st9 | -1.04 | 0.17 | 0e+00 | 3981 | 4013 |
| *Foraminifera* | trend.st2 | 1.15 | 0.19 | 0e+00 | 2481 | 2510 |
| *Gastropoda* | trend.st5 | -0.49 | 0.14 | 3e-04 | 6441 | 6476 |
| *Mammalia* | trend.st10 | 7.27 | 0.87 | 0e+00 | 2965 | 2994 |
| *Reptilia* | trend.st3 | 2.56 | 0.21 | 0e+00 | 5543 | 5575 |

| **Taxon** | **Ttrend** | **Tchange** | **Mean** | **Sd** |
| --- | --- | --- | --- | --- |
| *Arthropoda* | cool | cool | 0.40 | 0.16 |
| warm | cool | 0.19 | 0.09 |
| cool | warm | 0.20 | 0.08 |
| warm | warm | 0.24 | 0.09 |
| *Bivalvia* | cool | cool | 0.34 | 0.11 |
| warm | cool | 0.11 | 0.03 |
| cool | warm | 0.11 | 0.03 |
| warm | warm | 0.12 | 0.03 |
| *Cnidaria* | cool | cool | 0.12 | 0.02 |
| warm | cool | 0.14 | 0.03 |
| cool | warm | 0.14 | 0.02 |
| warm | warm | 0.12 | 0.01 |
| *Echinodermata* | cool | cool | 0.14 | 0.02 |
| warm | cool | 0.17 | 0.06 |
| cool | warm | 0.15 | 0.04 |
| warm | warm | 0.14 | 0.02 |
| *Foraminifera* | cool | cool | 0.53 | 0.16 |
| warm | cool | 0.17 | 0.04 |
| cool | warm | 0.17 | 0.05 |
| warm | warm | 0.40 | 0.09 |
| *Gastropoda* | cool | cool | 0.11 | 0.03 |
| warm | cool | 0.12 | 0.03 |
| cool | warm | 0.11 | 0.03 |
| warm | warm | 0.11 | 0.03 |
| *Mammalia* | cool | cool | 0.69 | 0.18 |
| warm | cool | 0.27 | 0.03 |
| cool | warm | 0.40 | 0.02 |
| warm | warm | 0.60 | 0.03 |
| *Reptilia* | cool | cool | 0.33 | 0.05 |
| warm | cool | 0.25 | 0.07 |
| cool | warm | 0.24 | 0.07 |
| warm | warm | 0.34 | 0.06 |

| **Simulation** | **Mean** | **Lower 95% CI** | **Upper 95% CI** | **Sd** |
| --- | --- | --- | --- | --- |
| *Null Model* | -0.001 | -0.002 | 0.000 | 0.018 |
| *Blue Noise* | 0.000 | 0.000 | 0.001 | 0.013 |
| *Red Noise* | 0.001 | 0.001 | 0.001 | 0.007 |