Table 1: Main model set - all observations

| Model | Velocity of climate change | Dispersal rate | Parameter | Estimate | Std. Error | t-value | p-value | R2 | n | K | LL | AICc | ΔAICc | AIC weight |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Velocity of climate change | Mean | - | Intercept | 0.2 | 0.26 | 0.79 | 0.43 | 0.02 | 447 | 3 | -1296.4 | 2598.86 | 0 | 0.15 |
| Velocity of climate change | Mean | - | Velocity of climate change | 0.23 | 0.09 | 2.63 | 0.01 | 0.02 | 447 | 3 | -1296.4 | 2598.86 | 0 | 0.15 |
| Minimum rate | Mean | Maximum | Intercept | 0.24 | 0.25 | 0.94 | 0.35 | 0.02 | 447 | 3 | -1296.46 | 2598.97 | 0.11 | 0.14 |
| Minimum rate | Mean | Maximum | Minimum rate | 0.23 | 0.09 | 2.61 | 0.01 | 0.02 | 447 | 3 | -1296.46 | 2598.97 | 0.11 | 0.14 |
| Minimum rate | 90th percentile | Maximum | Intercept | 0.2 | 0.26 | 0.75 | 0.46 | 0.01 | 447 | 3 | -1296.49 | 2599.04 | 0.18 | 0.14 |
| Minimum rate | 90th percentile | Maximum | Minimum rate | 0.15 | 0.06 | 2.6 | 0.01 | 0.01 | 447 | 3 | -1296.49 | 2599.04 | 0.18 | 0.14 |
| Velocity of climate change | 90th percentile | - | Intercept | 0.11 | 0.29 | 0.38 | 0.7 | 0.01 | 447 | 3 | -1296.72 | 2599.5 | 0.64 | 0.11 |
| Velocity of climate change | 90th percentile | - | Velocity of climate change | 0.15 | 0.06 | 2.51 | 0.01 | 0.01 | 447 | 3 | -1296.72 | 2599.5 | 0.64 | 0.11 |
| Minimum rate | Mean | Median | Intercept | 0.27 | 0.25 | 1.08 | 0.28 | 0.01 | 447 | 3 | -1297.01 | 2600.07 | 1.22 | 0.08 |
| Minimum rate | Mean | Median | Minimum rate | 0.23 | 0.1 | 2.39 | 0.02 | 0.01 | 447 | 3 | -1297.01 | 2600.07 | 1.22 | 0.08 |
| Potential dispersal rate and velocity of climate change (additive) | Mean | Median | Intercept | 0.23 | 0.26 | 0.89 | 0.37 | 0.02 | 447 | 4 | -1296.1 | 2600.28 | 1.43 | 0.07 |
| Potential dispersal rate and velocity of climate change (additive) | Mean | Median | Potential dispersal rate | 0 | 0 | -0.78 | 0.44 | 0.02 | 447 | 4 | -1296.1 | 2600.28 | 1.43 | 0.07 |
| Potential dispersal rate and velocity of climate change (additive) | Mean | Median | Velocity of climate change | 0.25 | 0.09 | 2.73 | 0.01 | 0.02 | 447 | 4 | -1296.1 | 2600.28 | 1.43 | 0.07 |
| Potential dispersal rate and velocity of climate change (additive) | Mean | Maximum | Intercept | 0.2 | 0.26 | 0.78 | 0.43 | 0.02 | 447 | 4 | -1296.4 | 2600.89 | 2.03 | 0.06 |
| Potential dispersal rate and velocity of climate change (additive) | Mean | Maximum | Potential dispersal rate | 0 | 0 | 0.04 | 0.97 | 0.02 | 447 | 4 | -1296.4 | 2600.89 | 2.03 | 0.06 |
| Potential dispersal rate and velocity of climate change (additive) | Mean | Maximum | Velocity of climate change | 0.23 | 0.1 | 2.35 | 0.02 | 0.02 | 447 | 4 | -1296.4 | 2600.89 | 2.03 | 0.06 |
| Potential dispersal rate and velocity of climate change (additive) | 90th percentile | Median | Intercept | 0.13 | 0.29 | 0.46 | 0.65 | 0.01 | 447 | 4 | -1296.51 | 2601.11 | 2.26 | 0.05 |
| Potential dispersal rate and velocity of climate change (additive) | 90th percentile | Median | Potential dispersal rate | 0 | 0 | -0.65 | 0.52 | 0.01 | 447 | 4 | -1296.51 | 2601.11 | 2.26 | 0.05 |
| Potential dispersal rate and velocity of climate change (additive) | 90th percentile | Median | Velocity of climate change | 0.16 | 0.06 | 2.57 | 0.01 | 0.01 | 447 | 4 | -1296.51 | 2601.11 | 2.26 | 0.05 |
| Minimum rate | 90th percentile | Median | Intercept | 0.28 | 0.26 | 1.08 | 0.28 | 0.01 | 447 | 3 | -1297.63 | 2601.31 | 2.46 | 0.04 |
| Minimum rate | 90th percentile | Median | Minimum rate | 0.15 | 0.07 | 2.11 | 0.04 | 0.01 | 447 | 3 | -1297.63 | 2601.31 | 2.46 | 0.04 |
| Potential dispersal rate and velocity of climate change (additive) | 90th percentile | Maximum | Intercept | 0.11 | 0.29 | 0.37 | 0.72 | 0.01 | 447 | 4 | -1296.68 | 2601.46 | 2.6 | 0.04 |
| Potential dispersal rate and velocity of climate change (additive) | 90th percentile | Maximum | Potential dispersal rate | 0 | 0 | 0.28 | 0.78 | 0.01 | 447 | 4 | -1296.68 | 2601.46 | 2.6 | 0.04 |
| Potential dispersal rate and velocity of climate change (additive) | 90th percentile | Maximum | Velocity of climate change | 0.14 | 0.06 | 2.23 | 0.03 | 0.01 | 447 | 4 | -1296.68 | 2601.46 | 2.6 | 0.04 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Median | Intercept | 0.21 | 0.27 | 0.78 | 0.44 | 0.02 | 447 | 5 | -1295.82 | 2601.78 | 2.93 | 0.04 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Median | Potential dispersal rate | 0 | 0.01 | 0.29 | 0.77 | 0.02 | 447 | 5 | -1295.82 | 2601.78 | 2.93 | 0.04 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Median | Velocity of climate change | 0.27 | 0.1 | 2.82 | 0.01 | 0.02 | 447 | 5 | -1295.82 | 2601.78 | 2.93 | 0.04 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Median | Potential dispersal rate:velocity of climate change | 0 | 0 | -0.73 | 0.46 | 0.02 | 447 | 5 | -1295.82 | 2601.78 | 2.93 | 0.04 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Median | Intercept | 0.11 | 0.3 | 0.37 | 0.71 | 0.02 | 447 | 5 | -1296.37 | 2602.88 | 4.02 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Median | Potential dispersal rate | 0 | 0.01 | 0.28 | 0.78 | 0.02 | 447 | 5 | -1296.37 | 2602.88 | 4.02 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Median | Velocity of climate change | 0.17 | 0.06 | 2.6 | 0.01 | 0.02 | 447 | 5 | -1296.37 | 2602.88 | 4.02 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Median | Potential dispersal rate:velocity of climate change | 0 | 0 | -0.53 | 0.6 | 0.02 | 447 | 5 | -1296.37 | 2602.88 | 4.02 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Maximum | Intercept | 0.19 | 0.27 | 0.69 | 0.49 | 0.02 | 447 | 5 | -1296.38 | 2602.89 | 4.04 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Maximum | Potential dispersal rate | 0 | 0 | 0.2 | 0.84 | 0.02 | 447 | 5 | -1296.38 | 2602.89 | 4.04 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Maximum | Velocity of climate change | 0.24 | 0.11 | 2.27 | 0.02 | 0.02 | 447 | 5 | -1296.38 | 2602.89 | 4.04 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | Mean | Maximum | Potential dispersal rate:velocity of climate change | 0 | 0 | -0.21 | 0.83 | 0.02 | 447 | 5 | -1296.38 | 2602.89 | 4.04 | 0.02 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Maximum | Intercept | 0.11 | 0.3 | 0.37 | 0.71 | 0.01 | 447 | 5 | -1296.68 | 2603.5 | 4.64 | 0.01 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Maximum | Potential dispersal rate | 0 | 0 | 0.07 | 0.94 | 0.01 | 447 | 5 | -1296.68 | 2603.5 | 4.64 | 0.01 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Maximum | Velocity of climate change | 0.14 | 0.07 | 2.07 | 0.04 | 0.01 | 447 | 5 | -1296.68 | 2603.5 | 4.64 | 0.01 |
| Potential dispersal rate and velocity of climate change (interactive) | 90th percentile | Maximum | Potential dispersal rate:velocity of climate change | 0 | 0 | 0.06 | 0.95 | 0.01 | 447 | 5 | -1296.68 | 2603.5 | 4.64 | 0.01 |
| Potential dispersal rate | - | Maximum | Intercept | 0.51 | 0.23 | 2.24 | 0.03 | 0 | 447 | 3 | -1299.16 | 2604.38 | 5.52 | 0.01 |
| Potential dispersal rate | - | Maximum | Potential dispersal rate | 0 | 0 | 1.18 | 0.24 | 0 | 447 | 3 | -1299.16 | 2604.38 | 5.52 | 0.01 |
| Potential dispersal rate | - | Median | Intercept | 0.63 | 0.22 | 2.86 | 0 | 0 | 447 | 3 | -1299.82 | 2605.69 | 6.83 | 0.01 |
| Potential dispersal rate | - | Median | Potential dispersal rate | 0 | 0 | -0.28 | 0.78 | 0 | 447 | 3 | -1299.82 | 2605.69 | 6.83 | 0.01 |