Table 1: Main model set - all observations

| Model | Local velocity of isotherm shifts | Potential dispersal rate | Parameter | Estimate | Std.Error | Conditional R2 | Marginal R2 | DF | t-value | p-value | n | K | LL | AICc | ΔAICc | AIC weight | Rank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Minimum rate | 3rd quartile | Maximum | Intercept | 0.49 | 0.21 | 0.34 | 0.1 | 252 | 2.31 | 0.02 | 421 | 4 | -1087.14 | 2182.37 | 0 | 0.43 | 1 |
| Minimum rate | 3rd quartile | Maximum | Minimum rate | 0.36 | 0.06 | 0.34 | 0.1 | 167 | 6.55 | 0 | 421 | 4 | -1087.14 | 2182.37 | 0 | 0.43 | 1 |
| Minimum rate | 3rd quartile | Median | Intercept | 0.53 | 0.22 | 0.36 | 0.09 | 252 | 2.45 | 0.02 | 421 | 4 | -1088.31 | 2184.72 | 2.35 | 0.13 | 2 |
| Minimum rate | 3rd quartile | Median | Minimum rate | 0.43 | 0.07 | 0.36 | 0.09 | 167 | 6.28 | 0 | 421 | 4 | -1088.31 | 2184.72 | 2.35 | 0.13 | 2 |
| Minimum rate | Mean | Maximum | Intercept | 0.57 | 0.21 | 0.33 | 0.09 | 252 | 2.72 | 0.01 | 421 | 4 | -1088.47 | 2185.04 | 2.67 | 0.11 | 3 |
| Minimum rate | Mean | Maximum | Minimum rate | 0.44 | 0.07 | 0.33 | 0.09 | 167 | 6.33 | 0 | 421 | 4 | -1088.47 | 2185.04 | 2.67 | 0.11 | 3 |
| Velocity of isotherm shift | 3rd quartile | - | Intercept | 0.41 | 0.23 | 0.33 | 0.09 | 252 | 1.83 | 0.07 | 421 | 4 | -1089.18 | 2186.45 | 4.08 | 0.06 | 4 |
| Velocity of isotherm shift | 3rd quartile | - | Velocity of isotherm shift | 0.35 | 0.06 | 0.33 | 0.09 | 167 | 6.2 | 0 | 421 | 4 | -1089.18 | 2186.45 | 4.08 | 0.06 | 4 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Maximum | Intercept | 0.43 | 0.22 | 0.35 | 0.1 | 251 | 1.92 | 0.06 | 421 | 6 | -1087.18 | 2186.57 | 4.2 | 0.05 | 5 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Maximum | Potential dispersal rate | 0 | 0 | 0.35 | 0.1 | 251 | 1.57 | 0.12 | 421 | 6 | -1087.18 | 2186.57 | 4.2 | 0.05 | 5 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Maximum | Velocity of isotherm shift | 0.51 | 0.08 | 0.35 | 0.1 | 166 | 5.98 | 0 | 421 | 6 | -1087.18 | 2186.57 | 4.2 | 0.05 | 5 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Maximum | Potential dispersal rate:velocity of isotherm shift | 0 | 0 | 0.35 | 0.1 | 166 | -2.04 | 0.04 | 421 | 6 | -1087.18 | 2186.57 | 4.2 | 0.05 | 5 |
| Velocity of isotherm shift | Mean | - | Intercept | 0.54 | 0.21 | 0.32 | 0.09 | 252 | 2.54 | 0.01 | 421 | 4 | -1089.24 | 2186.58 | 4.21 | 0.05 | 6 |
| Velocity of isotherm shift | Mean | - | Velocity of isotherm shift | 0.44 | 0.07 | 0.32 | 0.09 | 167 | 6.2 | 0 | 421 | 4 | -1089.24 | 2186.58 | 4.21 | 0.05 | 6 |
| Minimum rate | Mean | Median | Intercept | 0.61 | 0.21 | 0.34 | 0.09 | 252 | 2.87 | 0 | 421 | 4 | -1089.77 | 2187.64 | 5.26 | 0.03 | 7 |
| Minimum rate | Mean | Median | Minimum rate | 0.49 | 0.08 | 0.34 | 0.09 | 167 | 6.06 | 0 | 421 | 4 | -1089.77 | 2187.64 | 5.26 | 0.03 | 7 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Maximum | Intercept | 0.31 | 0.24 | 0.35 | 0.09 | 251 | 1.29 | 0.2 | 421 | 6 | -1087.75 | 2187.7 | 5.33 | 0.03 | 8 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Maximum | Potential dispersal rate | 0 | 0 | 0.35 | 0.09 | 251 | 1.49 | 0.14 | 421 | 6 | -1087.75 | 2187.7 | 5.33 | 0.03 | 8 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Maximum | Velocity of isotherm shift | 0.39 | 0.07 | 0.35 | 0.09 | 166 | 5.85 | 0 | 421 | 6 | -1087.75 | 2187.7 | 5.33 | 0.03 | 8 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Maximum | Potential dispersal rate:velocity of isotherm shift | 0 | 0 | 0.35 | 0.09 | 166 | -1.69 | 0.09 | 421 | 6 | -1087.75 | 2187.7 | 5.33 | 0.03 | 8 |
| Potential dispersal rate and velocity of isotherm shift (additive) | 3rd quartile | Median | Intercept | 0.42 | 0.23 | 0.33 | 0.09 | 251 | 1.84 | 0.07 | 421 | 5 | -1089.15 | 2188.45 | 6.07 | 0.02 | 9 |
| Potential dispersal rate and velocity of isotherm shift (additive) | 3rd quartile | Median | Potential dispersal rate | 0 | 0 | 0.33 | 0.09 | 251 | -0.24 | 0.81 | 421 | 5 | -1089.15 | 2188.45 | 6.07 | 0.02 | 9 |
| Potential dispersal rate and velocity of isotherm shift (additive) | 3rd quartile | Median | Velocity of isotherm shift | 0.36 | 0.06 | 0.33 | 0.09 | 167 | 6.15 | 0 | 421 | 5 | -1089.15 | 2188.45 | 6.07 | 0.02 | 9 |
| Potential dispersal rate and velocity of isotherm shift (additive) | 3rd quartile | Maximum | Intercept | 0.41 | 0.23 | 0.33 | 0.09 | 251 | 1.8 | 0.07 | 421 | 5 | -1089.16 | 2188.46 | 6.09 | 0.02 | 10 |
| Potential dispersal rate and velocity of isotherm shift (additive) | 3rd quartile | Maximum | Potential dispersal rate | 0 | 0 | 0.33 | 0.09 | 251 | 0.2 | 0.84 | 421 | 5 | -1089.16 | 2188.46 | 6.09 | 0.02 | 10 |
| Potential dispersal rate and velocity of isotherm shift (additive) | 3rd quartile | Maximum | Velocity of isotherm shift | 0.35 | 0.06 | 0.33 | 0.09 | 167 | 5.66 | 0 | 421 | 5 | -1089.16 | 2188.46 | 6.09 | 0.02 | 10 |
| Potential dispersal rate and velocity of isotherm shift (additive) | Mean | Median | Intercept | 0.56 | 0.22 | 0.33 | 0.09 | 251 | 2.57 | 0.01 | 421 | 5 | -1089.17 | 2188.48 | 6.11 | 0.02 | 11 |
| Potential dispersal rate and velocity of isotherm shift (additive) | Mean | Median | Potential dispersal rate | 0 | 0 | 0.33 | 0.09 | 251 | -0.4 | 0.69 | 421 | 5 | -1089.17 | 2188.48 | 6.11 | 0.02 | 11 |
| Potential dispersal rate and velocity of isotherm shift (additive) | Mean | Median | Velocity of isotherm shift | 0.44 | 0.07 | 0.33 | 0.09 | 167 | 6.16 | 0 | 421 | 5 | -1089.17 | 2188.48 | 6.11 | 0.02 | 11 |
| Potential dispersal rate and velocity of isotherm shift (additive) | Mean | Maximum | Intercept | 0.54 | 0.22 | 0.33 | 0.09 | 251 | 2.52 | 0.01 | 421 | 5 | -1089.24 | 2188.63 | 6.25 | 0.02 | 12 |
| Potential dispersal rate and velocity of isotherm shift (additive) | Mean | Maximum | Potential dispersal rate | 0 | 0 | 0.33 | 0.09 | 251 | -0.07 | 0.94 | 421 | 5 | -1089.24 | 2188.63 | 6.25 | 0.02 | 12 |
| Potential dispersal rate and velocity of isotherm shift (additive) | Mean | Maximum | Velocity of isotherm shift | 0.44 | 0.08 | 0.33 | 0.09 | 167 | 5.66 | 0 | 421 | 5 | -1089.24 | 2188.63 | 6.25 | 0.02 | 12 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Median | Intercept | 0.53 | 0.22 | 0.33 | 0.09 | 251 | 2.42 | 0.02 | 421 | 6 | -1088.54 | 2189.29 | 6.92 | 0.01 | 13 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Median | Potential dispersal rate | 0 | 0.01 | 0.33 | 0.09 | 251 | 0.75 | 0.45 | 421 | 6 | -1088.54 | 2189.29 | 6.92 | 0.01 | 13 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Median | Velocity of isotherm shift | 0.47 | 0.08 | 0.33 | 0.09 | 166 | 6.14 | 0 | 421 | 6 | -1088.54 | 2189.29 | 6.92 | 0.01 | 13 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | Mean | Median | Potential dispersal rate:velocity of isotherm shift | 0 | 0 | 0.33 | 0.09 | 166 | -1.11 | 0.27 | 421 | 6 | -1088.54 | 2189.29 | 6.92 | 0.01 | 13 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Median | Intercept | 0.41 | 0.23 | 0.33 | 0.09 | 251 | 1.78 | 0.08 | 421 | 6 | -1089.1 | 2190.4 | 8.02 | 0.01 | 14 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Median | Potential dispersal rate | 0 | 0.01 | 0.33 | 0.09 | 251 | 0.19 | 0.85 | 421 | 6 | -1089.1 | 2190.4 | 8.02 | 0.01 | 14 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Median | Velocity of isotherm shift | 0.36 | 0.06 | 0.33 | 0.09 | 166 | 5.81 | 0 | 421 | 6 | -1089.1 | 2190.4 | 8.02 | 0.01 | 14 |
| Potential dispersal rate and velocity of isotherm shift (interactive) | 3rd quartile | Median | Potential dispersal rate:velocity of isotherm shift | 0 | 0 | 0.33 | 0.09 | 166 | -0.32 | 0.75 | 421 | 6 | -1089.1 | 2190.4 | 8.02 | 0.01 | 14 |
| Potential dispersal rate | - | Maximum | Intercept | 1.1 | 0.21 | 0.4 | 0.02 | 251 | 5.21 | 0 | 421 | 4 | -1103.84 | 2215.78 | 33.4 | 0 | 15 |
| Potential dispersal rate | - | Maximum | Potential dispersal rate | 0 | 0 | 0.4 | 0.02 | 251 | 2.25 | 0.03 | 421 | 4 | -1103.84 | 2215.78 | 33.4 | 0 | 15 |
| Potential dispersal rate | - | Median | Intercept | 1.26 | 0.21 | 0.41 | 0 | 251 | 6.06 | 0 | 421 | 4 | -1106.31 | 2220.71 | 38.34 | 0 | 16 |
| Potential dispersal rate | - | Median | Potential dispersal rate | 0 | 0 | 0.41 | 0 | 251 | 0.35 | 0.73 | 421 | 4 | -1106.31 | 2220.71 | 38.34 | 0 | 16 |