S1. Supplementary Table. BioGeoBEARS model selection AICc values for each of the scenarios tested. Highlighted in grey lowest AICc and the second choice in light grey.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario | Model | LnL | numparams | d | e | j | AICc | AICc\_wt |
| **Control** | DEC | -102.4 | 2 | 0.014 | 0.0084 | 0 | 209 | 0.34 |
| DEC+J | -100.8 | 3 | 0.0046 | 1.00E-12 | 0.014 | 208.2 | 0.51 |
| DIVALIKE | -103.6 | 2 | 0.0068 | 1.00E-12 | 0 | 211.5 | 0.098 |
| DIVALIKE+J | -103.2 | 3 | 0.0062 | 1.00E-12 | 0.0045 | 213 | 0.047 |
| BAYAREALIKE | -120.4 | 2 | 0.0086 | 0.064 | 0 | 245.1 | 4.90E-09 |
| BAYAREALIKE+J | -111.3 | 3 | 0.0043 | 0.037 | 0.014 | 229.3 | 1.30E-05 |
| **Pebas & Acre Systems** | DEC | -106 | 2 | 0.014 | 0.0092 | 0 | 216.3 | 0.015 |
| DEC+J | -100.9 | 3 | 0.0055 | 1.00E-12 | 0.016 | 208.4 | 0.78 |
| DIVALIKE | -103.8 | 2 | 0.0083 | 1.00E-12 | 0 | 212 | 0.13 |
| DIVALIKE+J | -103.2 | 3 | 0.0073 | 1.00E-12 | 0.0064 | 213 | 0.076 |
| BAYAREALIKE | -121.2 | 2 | 0.0089 | 0.059 | 0 | 246.7 | 3.60E-09 |
| BAYAREALIKE+J | -111.6 | 3 | 0.0051 | 0.037 | 0.014 | 229.9 | 1.70E-05 |
| **Andes**  | DEC | -103.3 | 2 | 0.016 | 0.0084 | 0 | 211 | 0.54 |
| DEC+J | -102.6 | 3 | 0.0048 | 1.00E-12 | 0.015 | 211.8 | 0.36 |
| DIVALIKE | -105.4 | 2 | 0.0072 | 1.00E-12 | 0 | 215.1 | 0.068 |
| DIVALIKE+J | -104.9 | 3 | 0.0065 | 1.00E-12 | 0.0048 | 216.5 | 0.034 |
| BAYAREALIKE | -121.1 | 2 | 0.0087 | 0.062 | 0 | 246.5 | 1.00E-08 |
| BAYAREALIKE+J | -112 | 3 | 0.0044 | 0.038 | 0.014 | 230.6 | 3.00E-05 |