Table S1 Relative contribution to total aboveground biomass (AGB) per topography for 42 dominant species.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species Code | Jianfengling FDP | Low valley | Steep slope | Upper valley | Ridge |
| 1 | 9.20 | 7.36  | 10.47  | 10.72  | 7.83  |
| 2 | 6.94 | 3.59  | 7.50  | 5.70  | 9.49  |
| 3 | 4.43 | 4.99  | 4.44  | 4.58  | 3.94  |
| 4 | 4.42 | 4.41  | 4.90  | 4.69  | 3.73  |
| 5 | 4.00 | 3.01  | 3.97  | 4.69  | 4.12  |
| 6 | 3.58 | 4.58  | 3.09  | 3.91  | 3.17  |
| 7 | 3.28 | 5.83  | 3.60  | 1.65  | 2.62  |
| 8 | 2.71 | 1.57  | 3.27  | 2.03  | 3.40  |
| 9 | 2.67 | 2.65  | 2.61  | 3.64  | 1.98  |
| 10 | 2.56 | 0.48  | 2.25  | 0.93  | 5.52  |
| 11 | 2.45 | 1.76  | 2.90  | 0.86  | 3.71  |
| 12 | 2.21 | 1.79  | 2.16  | 2.16  | 2.58  |
| 13 | 2.11 | 2.37  | 1.89  | 2.41  | 1.94  |
| 14 | 2.00 | 2.71  | 1.68  | 2.84  | 1.21  |
| 15 | 1.78 | 1.88  | 1.98  | 1.44  | 1.78  |
| 16 | 1.74 | 0.69  | 2.19  | 1.28  | 2.33  |
| 17 | 1.73 | 1.73  | 2.21  | 1.29  | 1.59  |
| 18 | 1.62 | 0.91  | 2.34  | 0.89  | 1.91  |
| 19 | 1.52 | 2.11  | 1.64  | 1.23  | 1.28  |
| 20 | 1.43 | 0.55  | 1.81  | 0.75  | 2.15  |
| 21 | 1.36 | 1.61  | 0.77  | 2.67  | 0.77  |
| 22 | 1.23 | 0.67  | 1.24  | 1.20  | 1.60  |
| 23 | 1.13 | 1.07  | 0.90  | 1.25  | 1.31  |
| 24 | 1.00 | 0.52  | 1.47  | 0.69  | 1.07  |
| 25 | 0.97 | 0.60  | 0.85  | 1.09  | 1.22  |
| 26 | 0.95 | 1.69  | 0.69  | 1.40  | 0.39  |
| 27 | 0.89 | 1.23  | 0.73  | 0.91  | 0.84  |
| 28 | 0.81 | 1.04  | 1.02  | 0.85  | 0.42  |
| 29 | 0.81 | 2.58  | 0.26  | 0.72  | 0.33  |
| 30 | 0.78 | 1.25  | 0.37  | 1.32  | 0.46  |
| 31 | 0.77 | 0.35  | 0.67  | 0.89  | 1.05  |
| 32 | 0.74 | 0.48  | 0.84  | 0.79  | 0.77  |
| 33 | 0.74 | 0.59  | 0.68  | 0.45  | 1.11  |
| 34 | 0.72 | 0.34  | 0.59  | 0.89  | 0.96  |
| 35 | 0.72 | 0.93  | 0.50  | 1.21  | 0.40  |
| 36 | 0.70 | 0.62  | 0.47  | 1.36  | 0.46  |
| 37 | 0.68 | 1.62  | 0.73  | 0.48  | 0.18  |
| 38 | 0.67 | 0.72  | 0.36  | 1.02  | 0.66  |
| 39 | 0.66 | 1.02  | 0.58  | 0.84  | 0.37  |
| 40 | 0.62 | 1.52  | 0.46  | 0.68  | 0.18  |
| 41 | 0.55 | 1.07  | 0.13  | 1.06  | 0.26  |
| 42 | 0.41 | 0.96  | 0.15  | 0.61  | 0.16  |

Species codes are defined in Table 3.

Table S2 Species-topography associations using torus-translation tests

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species Code | Low valley | Steep slope | Upper valley | Ridge |
| 1 |  |  |  |  |
| 2 | -- |  |  | ++ |
| 3 | ++ |  |  | -- |
| 4 |  | + |  | -- |
| 5 | - |  |  |  |
| 6 |  |  |  |  |
| 7 |  |  |  |  |
| 8 | -- | + | - | + |
| 9 |  |  | ++ | - |
| 10 | -- |  | -- | ++ |
| 11 |  |  | -- | ++ |
| 12 | - |  |  | + |
| 13 |  | - | + |  |
| 14 | ++ |  | ++ | -- |
| 15 |  |  | - |  |
| 16 | -- |  |  | + |
| 17 |  |  |  |  |
| 18 | - | + | -- |  |
| 19 | ++ |  |  |  |
| 20 | - |  | - | + |
| 21 |  |  | ++ |  |
| 22 | -- |  |  | ++ |
| 23 |  |  |  |  |
| 24 | - | + |  |  |
| 25 | - |  |  | + |
| 26 | ++ |  | + | -- |
| 27 | + |  |  |  |
| 28 |  |  |  | -- |
| 29 | ++ | -- |  | - |
| 30 | + | -- | + | - |
| 31 | -- |  |  |  |
| 32 | - |  |  |  |
| 33 |  |  | -- | ++ |
| 34 | -- |  |  |  |
| 35 |  | - | ++ | -- |
| 36 |  |  | ++ | - |
| 37 | ++ |  |  | -- |
| 38 |  | - |  |  |
| 39 | ++ |  | ++ | -- |
| 40 | ++ |  |  | -- |
| 41 |  | -- | + |  |
| 42 | ++ | - |  | - |

Species codes are defined in Table 3. ‘+’ and ‘++’ respectively indicate significant positive associations at levels of 0.05 and 0.01, and ‘-’ and ‘--’ respectively indicate significant negative associations at levels of 0.05 and 0.01.