

附录2 多元线性回归模型结果。图中 $P < 0.05$ 部分用粗体显示, 数字保留至小数点后3位。研究中我们将变量进行相关性分析及回归分析以评估变量面积(AREA)、平均形状复杂性指数(MSI)、对多样性指数的相关关系和它们之间相互依赖的定量关系。Appendix 2 The results of the multiple linear regression model. $P < 0.05$ part is shown in bold and the figures are retained to the third decimal place. In the study, we conducted correlation and regression analysis of variables to evaluate the variable area (Area), mean shape complexity index (MSI), correlation to diversity index and quantitative relationship between them. 44 km, 44 km plot; CC, Tea factory backhill plot; SK, Menglun Reservoir plot; DPZ, Dapingzhang plot.

| | 物种丰富度 Species richness | | | | Shannon Wiener 指数 Shannon -Wiener index | | | | Simpson 指数 Simpson index | | | |
|--------------|------------------------|--------|-------------------------------|--------------|--|-------|-------------------------------|--------------|--------------------------|-------|-------------------------------|--------------|
| | Beta | SE (B) | Multiple (R ²) | <i>P</i> | Beta | SE(B) | Multiple (R ²) | <i>P</i> | Beta | SE(B) | Multiple (R ²) | <i>P</i> |
| 44 km | | | | | | | | | | | | |
| Area | 0.949 | 0.24 | 0.900 | 0.000 | 0.671 | 0.002 | 0.45 | 0.000 | 0.392 | 0.001 | 0.154 | 0.012 |
| MSI | 0.478 | 5.603 | 0.208 | 0.002 | 0.841 | 0.207 | 0.302 | 0.000 | 0.444 | 0.078 | 0.197 | 0.004 |
| CC | | | | | | | | | | | | |
| Area | 0.968 | 0.025 | 0.937 | 0.000 | 0.751 | 0.004 | 0.565 | 0.000 | 0.607 | 0.001 | 0.368 | 0.001 |
| MSI | 0.643 | 2.66 | 0.414 | 0.000 | 0.617 | 0.165 | 0.381 | 0.001 | 0.537 | 0.036 | 0.288 | 0.004 |
| DPZ | | | | | | | | | | | | |
| Area | 0.771 | 0.015 | 0.594 | 0.000 | 0.704 | 0.002 | 0.495 | 0.000 | 0.636 | 0.001 | 0.405 | 0.000 |
| MSI | 0.47 | 1.439 | 0.221 | 0.000 | 0.45 | 0.207 | 0.202 | 0.001 | 0.445 | 0.093 | 0.198 | 0.001 |
| SK | | | | | | | | | | | | |
| Area | 0.755 | 0.077 | 0.57 | 0.000 | 0.572 | 0.002 | 0.327 | 0.002 | 0.407 | 0.001 | 0.166 | 0.039 |
| MSI | 0.593 | 13.426 | 0.352 | 0.001 | 0.638 | 0.326 | 0.408 | 0.000 | 0.554 | 0.096 | 0.307 | 0.003 |