附录 2　新疆杨树人工林片林与林带 Moran I 空间自相关分析
Appendix 2　Moran I spatial autocorrelation analysis on forest block stand and forest belt of Xinjiang poplar plantations

蜘蛛群落结构 Spider community structure	Moran I指数 Moran I index	预期指数 Expectation index	方差 Variance	Z 值 Z value	P 值 P value
Shannon 多样性指数 Shannon diversity index	−0.044764	−0.016667	0.000268	−1.717643	0.085862
Simpson 森多样性指数 Simpson diversity index	−0.039508	−0.016667	0.000267	−1.398191	0.162056
Pielou 均匀度指数 Pielou evenness index	−0.031415	−0.016667	0.000270	−0.897788	0.369298
蜘蛛科数 Number of spider families	−0.018464	−0.016667	0.000271	−0.1099196	0.913047
蜘蛛属数 Number of spider genera	−0.037886	−0.016667	0.000271	−1.287148	0.198043
蜘蛛种数 Number of spider species	−0.036986	−0.016667	0.000270	−1.237646	0.215947
蜘蛛个体数 Number of spider individuals	−0.016267	−0.016667	0.000263	0.04647	0.980336
片状网型蜘蛛个体数 Number of sheet web spider individuals	−0.015814	−0.016667	0.000146	0.070522	0.943779
空间网型蜘蛛个体数 Number of space web spider individuals	−0.015468	−0.016667	0.000136	0.102738	0.918171
圆网型蜘蛛个体数 Number of orb web spider individuals	−0.010949	−0.016667	0.000248	0.363028	0.716584
专性捕食型蜘蛛个体数 Number of specialists spider individuals	−0.014583	−0.016667	0.000236	0.135705	0.892054
地表游猎型蜘蛛个体数 Number of ground hunters spider individuals	−0.016710	−0.016667	0.000262	−0.002689	0.997855
空间游猎型蜘蛛 Number of other hunters spider individuals	−0.007398	−0.016667	0.000203	0.650874	0.515128
伏击捕食型蜘蛛个体数 Number of ambush hunters spider individuals	−0.026250	−0.016667	0.000244	−0.612881	0.539955

Moran I 系数的取值范围为[−1, 1]。当其取值大于 0 时, 表明所研究区域存在空间正相关, 且取值越接近 1, 表明空间正自相关性越强, 研究对象的值呈聚集分布; 当其取值小于 0 时, 表明所研究区域存在空间负相关, 取值越接近−1, 表明空间负自相关性越强, 研究对象的值呈离散互斥(高值周围排斥高值、低值周围排斥低)分布; 当其取值接近于 0, 研究对象的值呈随机分布, 不存在自相关性。P > 0.05 说明研究对象的值不存在显著的空间自相关, 属于空间随机分布。

The value range of Moran I is [−1, 1]. When its value is greater than 0, it indicates that there is a positive spatial correlation in the study area, and the closer the value is to 1, the stronger the positive spatial autocorrelation is, and the value of the research object is in a clustered distribution. When its value is less than 0, it indicates that there is a negative spatial correlation in the studied area. The closer the value is to −1, the stronger the negative spatial autocorrelation is, and the value of the research object is discrete and mutually exclusive distribution. When the value is close to 0, the value of the research object is randomly distributed, and there is no autocorrelation. P > 0.05 indicates that there is no significant spatial autocorrelation in the value of the research object, which belongs to the spatial random distribution.