

研究简报

## 越北腹露蝗若虫空间格局的地质统计学分析

陈强, 吴伟坚, 张振飞, 梁广文

华南农业大学昆虫生态研究室, 广州 510642

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**摘要** 应用地质统计学研究广东北部桑田中越北腹露蝗 (*Fruhstorferiola tonkinensis* Will) 1~5龄若虫的空间格局动态. 结果表明: 越北腹露蝗1~5龄若虫种群变异曲线函数均为球状模型, 表现为聚集分布, 但各龄若虫的空间依赖范围分别为1.973、1.968、2.169、2.302和4.307 m. 利用Kriging插值法由地质统计学软件Surfer 8.0产生的各龄若虫等值线图清晰地反映了各龄若虫的空间位置, 表明越北腹露蝗有别于其它一些蝗虫, 其低龄若虫呈聚居型, 高龄若虫呈散居型分布.

**关键词** [越北腹露蝗](#) [空间格局](#) [地质统计学](#) [半变异函数](#) [等值线图](#)

分类号

## Geostatistic analysis of spatial pattern of *Fruhstorferiola tonkinensis* Will (Orthoptera: Catantopidae) nymphs

CHEN Qiang, WU Wei-jian, ZHANG Zhen-fei, LIANG Guang-wen

Laboratory of Insect Ecology, South China Agricultural University, Guangzhou 510642, China

### Abstract

By the methods of geostatistics, this paper studied the spatial pattern of *Fruhstorferiola tonkinensis* nymphs in mulberry fields of north Guangdong. The results showed that the semivariogram of *F. tonkinensis* nymphs at all development stages could be described by spherical model, implying an aggregative distribution, and the range of their spatial correlation was 1.973, 1.968, 2.169, 2.302 and 4.307 m from 1st to 5th instars. Based on the information obtained from investigation site, the isoclines maps of the instars were created by the geostatistical software Surfer 8.0 with Kriging interpolation, and the resulting maps gave a clear indication about the spatial patterns of the instars. Unlike other locusts, the younger instars of *F. tonkinensis* had an aggregative distribution, while the elder ones were dispersive in distribution.

**Key words** [Fruhstorferiola tonkinensis Will](#) [spatial pattern](#) [geostatistic analysis](#) [semivariogram](#) [isoclines map](#)

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