

综合评述

核rDNA-ITS序列在昆虫学研究上的应用

刘延滨^{1,2}, 姬兰柱¹

¹中国科学院沈阳应用生态研究所, 沈阳 110016; ²中国科学院研究生院, 北京 100049

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摘要 核糖体DNA内部转录间隔区(internal transcribed spacer, ITS)作为线粒体DNA信息的补充, 在昆虫学的研究中越来越受到重视. 本文描述了ITS序列的结构和特点, 总结了其在品系鉴定、亲缘关系和系统发育、物种进化及扩散、昆虫与环境的关系方面的应用. 品系鉴定多集中于形体学无法区分的种类; 亲缘关系和系统发育的研究目的是了解物种是如何起源和进化的; 而与环境的关系主要针对社会性昆虫和寄生性昆虫. 最后讨论了ITS序列在应用中所存在的问题, 以及造成这些问题的可能原因.

关键词 [rDNA](#) [ITS序列](#) [昆虫学](#)

分类号

Application of rDNA-ITS sequence in entomology.

LIU Yan-bin^{1,2}, JI Lan-zhu¹

¹Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang 110016; ²Graduate University of Chinese Academy of Sciences, Beijing 100049

Abstract

As an important complement of the information obtained from mtDNA, the internal transcribed spacer (ITS) of nuclear ribosomal DNA is being increasingly applied in entomological study. This paper introduced the structure and characters of ITS, and summarized its applications in identifying insect species and in studying their relative relationships and phylogenesis, evolution and spread, and relations with environment. ITS was mainly applied in identifying the species whose morphological differences were subtle. The research of relative relationships and phylogenesis was aimed to understand the species origin and evolution, while the study on the relations with environment was mainly focused on sociological and parasitic insects. The problems and their possible causes in ITS application were discussed.

Key words [rDNA](#) [ITS sequence](#) [entomology](#)

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