

植物叶片气孔性状变异的影响因素及研究方法

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Affecting factors of plant stomatal traits variability and relevant investigation methods.

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全文: PDF (443 KB) HTML (1 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要

气孔是陆生植物与外界环境进行水分和气体交换的主要通道,在全球水和碳循环中发挥着重要作用.植物的气孔性状包括气孔密度、气孔形状和大小、气孔指数等,是植物在进化过程中对外界环境因子长期适应的结果,并对环境因子变化表现出高度的敏感性.本文评述了国内外近30年来植物气孔性状与大气CO₂浓度、温度、水分、光照等环境因素的关系研究的主要方法和成果,展望了今后植物气孔性状对气候变化响应的主要研究方向.

关键词: 陆生植物 气孔性状 环境因素 气候

Abstract:

Stoma is the main routeway for water and gas exchange in terrestrial plants, playing an important role on the global water and carbon cycles. Stomatal traits, including stomatal density, stomatal shape, stomatal size, and stomatal index, are the long term adaptation result of plants to environmental factors during evolution, and sensitive to the changes of environmental factors. This paper reviewed the last 30 years research advances in the relationships between stomatal traits and environmental factors (e.g., air CO₂ concentration, temperature, water, and light, etc.) and the main relevant investigation methods, and proposed the main directions of future research in stomatal traits in context of climate change.

Key words: terrestrial plant stomatal trait environmental factor climate

引用本文:

. 植物叶片气孔性状变异的影响因素及研究方法[J]. 应用生态学报, 2011, 22(01): 250-256.

. Affecting factors of plant stomatal traits variability and relevant investigation methods.[J]. Chinese Journal of Applied Ecology, 2011, 22(01): 250-256.

链接本文:

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- [1] 袁海燕,张煜煜,徐华军,杨晓光. 气候变化背景下中国农业气候资源变化V.宁夏农业气候资源变化特征[J]. 应用生态学报, 2011, 22(05): 1247-1254.

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