

研究论文

绞股蓝种群次生代谢产物的动态及其生态学意义

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摘要 利用植物生理生态学方法, 研究了自然条件下不同绞股蓝 *Gynostemma pentaphyllum* 种群中黄酮类化合物和绞股蓝皂甙的动态特征及其生态学意义。结果表明: (1) 同一种群的茎、叶片和枝中黄酮类化合物和绞股蓝皂甙的动态不同, 在生活史的不同阶段, 种群中这两类次生代谢产物受茎和叶片的影响程度各异; (2) 不同种群中, 这两类物质的动态各异; (3) 黄酮类化合物和绞股蓝皂甙都具有特定的生理功能和生态学意义, 并具有较强的可塑性; (4) 影响这两类次生代谢产物动态的主导环境因子各异。次生代谢产物在植物种群的生活史中发挥着重要作用。

关键词 [绞股蓝种群](#) [黄酮类化合物](#) [绞股蓝皂甙](#) [动态特征](#) [生态学意义](#)

分类号

Dynamics of Secondary Metabolic Products in *Gynostemma pentaphyllum* Populations and Their Ecological Significance

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Abstract

The authors examined the dynamic features of flavonoids and *Gynostemma*. saponin in the different *Gynostemma pentaphyllum* populations under natural conditions and their ecological significance through the plant physio- ecological methods. The results show: (1) the dynamic patterns of flavonoids and G. saponin in the stems, blades and shoots in the populations under the same surroundings are different. At different phases of life history of the populations, the stems and blades have different effects on flavonoids and G. saponin in the populations; (2) the dynamic patterns of the two kinds of substances vary with different populations; (3) flavonoids and G. saponin have their own physiological functions, moreover, they have both plasticity; (4) the dominant environmental factors affecting the dynamics of flavonoids and G. saponin are different. Thus secondary metabolic products play a very important role in the life history of plant populations.

Key words [Gynostemma pentaphyllum populations](#) [Flavonoids](#) [G.saponin](#) [Dynamic features](#) [Ecological significance](#)

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