

研究报告

松嫩平原碱化草甸旱地生境芦苇种群的芽流和芽库动态

杨允菲; 魏春雁; 张宝田; 刘宝

东北师范大学草地研究所, 植被生态科学教育部重点实验室, 长春 130024

收稿日期 2004-10-3 修回日期 2004-12-14 网络版发布日期 接受日期

摘要

在松嫩平原碱化草甸, 旱地生境芦苇种群的根茎分布在土层约1 m的不同深度, 一般可生活6个年度, 个别根茎可存活7~9年, 乃至更长的时间. 通过芦苇根茎芽调查, 创建了植物种群的芽流模型. 提出了采用当年1龄级根茎芽的输入率与其它龄级休眠芽库存率之和估计芦苇种群芽库贮量动态的方法. 结果表明, 随着生长季的进程, 芦苇种群芽库输入率呈不断增加趋势, 而萌发输出率呈不断减少的趋势, 死亡输出率则大体保持相同的较低水平. 至休眠前期的9月底, 芽库输入率已为输出率的2.04倍. 在松嫩平原碱化草甸旱地生境, 芦苇种群各龄级根茎的休眠芽有一个稳定的萌发输出过程. 定量分析结果表明, 芦苇种群不同龄级根茎的休眠芽每年都有11%的比率萌发形成1龄级新根茎. 1龄级根茎顶端翌年发育为分蘖株后, 可为直接相连接的老龄级根茎就近输送养分, 从而实现老龄级根茎芽的活力.

关键词 [芦苇; 根茎; 龄级; 芽库; 芽流模型; 碱化草甸; 旱地生境](#)

分类号

Dynamics of bud flow and bud bank of *Phragmites communis* population in dry land habitat of alkalinized meadow in the Songnen Plains of China

YANG Yunfei, WEI Chunyan, ZHANG Baotian, LIU Bao

Key Laboratory for Vegetation Ecology, Ministry of Education, Institute of Grassland Science, Northeast Normal University, Changchun 130024, China

Abstract

In the dry land habitat of alkalinized meadow in Songnen Plains, the rhizomes of *Phragmites communis* population are distributed in different depths of one meter soil layer, which usually live for 6 years and a few for 7~9 years or even longer. Based on the investigation of their buds, a "bud flow" model of the population was established, and the method for estimating the dynamics of its bud bank storage, i.e., adding the input rate of 1st year age-class rhizome buds to the storage rate of other age-classes dormant buds in the bank, was put forward. The results showed that the input rate of the bud bank increased with plant growth seasons while the burgeoned output rate exhibited a decreasing trend, whereas the output rate of the dead remained at a low level on the whole. By the end of September in the early dormant period, the input rate of the bud bank was as 2.04 times as its output rate, and the dormant buds of each age-class manifested a steady burgeoned

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(463KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 包含](#)

[“芦苇; 根茎; 龄级; 芽库; 芽流模型; 碱化草甸; 旱地生境” 的相关文章](#)

▶ [本文作者相关文章](#)

· [杨允菲](#)

· [魏春雁](#)

· [张宝田](#)

· [刘宝](#)

output. Quantitative analysis indicated that the burgeoned output rate of dormant buds increased by 11% each year. In another word, 11% of different age-classes dormant buds would germinate and form one-year class new rhizomes. The top of one-year class new rhizomes would develop to ramets in the next year, which would transport nutrients to nearby old-age rhizomes, and thus, maintain the vitality of old-age class rhizomes.

Key words

[Phragmites communis](#) [Rhizome](#) [Age class](#) [Bud bank](#) [Bud flow model](#) [Dry land habitat](#) [Alkalinized meadow](#)

DOI:

通讯作者