

研究报告

# 长白山暗针叶林苔藓植物对三种针叶树种子萌发及幼苗生长的影响

藺菲<sup>1,2</sup>, 郝占庆<sup>1</sup>, 叶吉<sup>1</sup>, 姜萍<sup>1</sup>

<sup>1</sup>中国科学院沈阳应用生态研究所, 沈阳 110016; <sup>2</sup>中国科学院研究生院, 北京 100039

收稿日期 2005-12-14 修回日期 2006-6-8 网络版发布日期 接受日期

**摘要** 研究了长白山暗针叶林两种主要地面苔藓植物——塔藓和拟垂枝藓对红松、红皮云杉和落叶松种子萌发及幼苗生长的影响。结果表明,在一定浓度下,塔藓浸提液抑制红松发芽,拟垂枝藓浸提液促进红松发芽;苔藓浸提液对红皮云杉和落叶松的发芽率没有显著影响,但不同程度地加快了种子日萌发高峰的出现。用苔藓植物体直接培养红皮云杉和落叶松种子,发现活植物体量大时对发芽率没有显著影响,但延迟了红皮云杉种子萌发高峰的出现,加速了落叶松种子萌发高峰的出现;杀青后的苔藓植物体则明显地抑制种子发芽。通过幼苗培养实验,发现苔藓植物浸提液抑制红皮云杉和红松幼苗生长,但促进了落叶松幼苗的生长;不同处理的苔藓植物体对幼苗生长的影响差异较大,活植物体量大时,两种苔藓均促进了红皮云杉和落叶松幼苗生长,而杀青后植物体则明显地抑制幼苗生长。

**关键词** [苔藓植物](#) [针叶树](#) [水浸提液](#) [种子萌发](#) [幼苗生长](#)

分类号

## Effects of bryophytes in dark coniferous forest of Changbai Mountains on three conifers seed germination and seedling growth

LIN Fei<sup>1,2</sup>, HAO Zhanqing<sup>1</sup>, YE Ji<sup>1</sup>, JIANG Ping<sup>1</sup>

<sup>1</sup>Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang 110016, China; <sup>2</sup>Graduated University of Chinese Academy of Sciences, Beijing 100039, China

### Abstract

This paper studied the effects of *Hylocomium splendens* and *Rhytidiadelphus triquetrus*, the main bryophytes in dark coniferous forests of Changbai Mountains, on the seed germination and seedling growth of *Pinus koraiensis*, *Picea koraiensis* and *Larix olgensis*. The results indicated that at definite concentrations, the water extract of *H. splendens* inhibited *Picea koraiensis* seed germination, while that of *R. triquetrus* promoted it. Although the water extracts of the two bryophytes had no obvious effects on the seed germination of *Picea koraiensis* and *Larix olgensis*, they expedited the occurrence of the tree species' daily germination peak. The water extracts of test bryophytes inhibited the seedling growth of *P. koraiensis* and *Picea koraiensis*, but promoted that of *Larix olgensis*. The living shoots of the two bryophytes had no obvious effects on the seed germination of *Picea koraiensis* and *Larix olgensis*, but delayed the daily germination peak of *Picea koraiensis* while promoted that of *Larix olgensis*, and the killed shoots inhibited the seed germination of all test tree species. Living shoots in larger amounts promoted the seedling growth of *Picea koraiensis* and *Larix olgensis*, but killed shoots were in adverse.

**Key words** [Bryophyte](#) [Conifer](#) [Water extract](#) [Seed germination](#) [Seedling growth](#)

DOI:

通讯作者

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(973KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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“苔藓植物”的相关文章](#)
- ▶ [本文作者相关文章](#)

- [藺菲](#)
- [郝占庆](#)
- [叶吉](#)
- [姜萍](#)