



ISSN 1005-264X  
www.plant-ecology.com

# 植物生态学报

## Chinese Journal of Plant Ecology

第47卷 第5期 2023年5月 Vol. 47 No. 5 May 2023



主办单位：中国科学院植物研究所  
中国植物学会

Sponsors: Institute of Botany, Chinese Academy of Sciences  
Botanical Society of China

植物生态学报

Chinese Journal of Plant Ecology

Vol. 47 No. 5 May 2023

Pages 597-744

# 植物生态学报

Zhiwu Shengtai Xuebao

2023年5月 第47卷 第5期

## 目次

### 综述

597 叶片凋落物分解的主场优势研究进展

赵小祥 朱彬彬 田秋香 林巧玲 陈龙  
刘峰

### 研究论文

608 全球尺度上调落物初始酚类含量特征及影响因素

余继梅 吴福忠 袁吉金 遐魏舒沅  
袁朝祥 彭艳 倪祥银 岳楷

618 亚热带天然阔叶林凋落物分解过程中活性、惰性碳氮的动态特征

李慧璇 马红亮 尹云锋 高人

629 氮添加和凋落物处理对华西雨屏区常绿阔叶林凋落叶分解的影响

仲琦 李曾燕 马炜 况雨潇 邱岭军  
黎蕴洁 涂利华

644 模拟氮沉降对鄂西南贫营养泥炭地两种藓类植物生长与分解的影响

李小玲 朱道明 余玉蓉 吴浩 牟利  
洪柳 刘雪飞 卜贵军 薛丹 吴林

660 林窗对川西亚高山凋落叶总酚和缩合单宁损失动态的影响

杜婷 陈玉莲 毕境徽 杨玉婷 张丽  
游成铭 谭波 徐振锋 王丽霞 刘思凝  
李晗

672 雪被去除减缓岷江冷杉凋落叶易分解碳释放

赖硕钿 吴福忠 吴秋霞 朱晶晶 倪祥银

687 叶际微生物对马尾松凋落针叶分解的影响

郑炆 孙学广 熊洋阳 袁贵云 丁贵杰

699 荒漠草原土壤氨氧化细菌群落结构对氮添加和枯落物输入的响应

张雅琪 庞丹波 陈林 曹萌豪 何文强  
李学斌

713 亚高寒草甸群落结构决定群落生产力实例验证

李伟 张荣

724 滇西北藜麦氮磷钾生态化学计量特征的物候期动态

李兆光 杨文高 和桂青 徐天才 和琼姬  
侯志江 李燕 薛润光

733 不同水热梯度下冠层优势树种叶片热力性状及适应策略的变化趋势

周莹莹 林华

**封面说明:** 四川省理县毕棚沟自然保护区亚高山森林景观(王壮摄)。川西亚高山森林地处青藏高原东缘与四川盆地过渡地带,以岷江冷杉(*Abies fargesii* var. *faxoniana*)等耐寒针叶树种为优势种,冬季有明显的季节性降雪,积雪覆盖和土壤冻融可持续5-6个月。杜婷等研究了川西亚高山林窗内外不同位置下6种常见植物凋落叶总酚和缩合单宁在3年分解过程中的动态特征(本期660-671页)。

# Chinese Journal of Plant Ecology

May 2023 Vol. 47 No. 5

## CONTENTS

### Review

- 597 Research progress on home-field advantage of leaf litter decomposition

ZHAO Xiao-Xiang, ZHU Bin-Bin, TIAN Qiu-Xiang, LIN Qiao-Ling, CHEN Long, and LIU Feng

### Research Articles

- 608 Global patterns and influencing factors of initial concentrations of phenols in plant litter

YU Ji-Mei, WU Fu-Zhong, YUAN Ji, JIN Xia, WEI Shu-Yuan, YUAN Chao-Xiang, PENG Yan, NI Xiang-Yin, and YUE Kai

- 618 Dynamic of labile, recalcitrant carbon and nitrogen during the litter decomposition in a sub-tropical natural broadleaf forest

LI Hui-Xuan, MA Hong-Liang, YIN Yun-Feng, and GAO Ren

- 629 Effects of nitrogen addition and litter manipulations on leaf litter decomposition in western edge of Sichuan Basin, China

ZHONG Qi, LI Zeng-Yan, MA Wei, KUANG Yu-Xiao, QIU Ling-Jun, LI Yun-Jie, and TU Li-Hua

- 644 Effects of simulated nitrogen deposition on growth and decomposition of two bryophytes in ombrotrophic peatland, southwestern Hubei, China

LI Xiao-Ling, ZHU Dao-Ming, YU Yu-Rong, WU Hao, MOU Li, HONG Liu, LIU Xue-Fei, BU Gui-Jun, XUE Dan, and WU Lin

- 660 Effects of forest gap on losses of total phenols and condensed tannins of foliar litter in a subalpine forest of western Sichuan, China

DU Ting, CHEN Yu-Lian, BI Jing-Hui, YANG Yu-Ting, ZHANG Li, YOU Cheng-Ming, TAN Bo, XU Zhen-Feng, WANG Li-Xia, LIU Si-Ning, and LI Han

- 672 Reduced release of labile carbon from *Abies fargesii* var. *faxoniana* needle litter after snow removal in an alpine forest

LAI Shuo-Tian, WU Fu-Zhong, WU Qiu-Xia, ZHU Jing-Jing, and NI Xiang-Yin

- 687 Effects of phyllospheric microorganisms on litter decomposition of *Pinus massoniana*

ZHENG Yang, SUN Xue-Guang, XIONG Yang-Yang, YUAN Gui-Yun, and DING Gui-Jie

- 699 Response of ammonia oxidizing bacteria to nitrogen fertilization and plant litter input on desert steppe

ZHANG Ya-Qi, PANG Dan-Bo, CHEN Lin, CAO Meng-Hao, HE Wen-Qiang, and LI Xue-Bin

- 713 Case verification of community structure determining community productivity in subalpine meadow

LI Wei and ZHANG Rong

- 724 Phenological dynamics of nitrogen, phosphorus and potassium stoichiometry in *Chenopodium quinoides* in northwest Yunnan, China

LI Zhao-Guang, YANG Wen-Gao, HE Gui-Qing, XU Tian-Cai, HE Qiong-Ji, HOU Zhi-Jiang, LI Yan, and XUE Run-Guang

- 733 Variation of leaf thermal traits and plant adaptation strategies of canopy dominant tree species along temperature and precipitation gradients

ZHOU Ying-Ying and LIN Hua

---

**Cover illustration:** The landscape of subalpine forest in Bipenggou National Nature Reserve, Li County, Sichuan Province (Photographed by WANG Zhuang). The subalpine forest in Western Sichuan is located in the transition zone between the eastern edge of the Qingzang Plateau and Sichuan Basin, with Minjiang fir (*Abies fargesii* var. *faxoniana*) and other hardy coniferous trees as the dominant species. Seasonal snowfall always happens in winter, with snow coverage and soil freeze-thaw cycling lasting for 5–6 months every year. Du *et al.* investigated the dynamics of total phenols and condensed tannins in leaf litters of six species across three decomposing years under different positions within forest gap in a subalpine forest of Western Sichuan (Pages 660-671 of this issue).