



生态学报

ACTA ECOLOGICA SINICA

第41卷 第7期 Vol. 41 No. 7 2021

ISSN 1000-0933 CN 11-2031/Q

中国生态学会
中国科学院生态环境研究中心

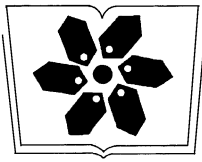
主办



科学出版社
Science Press

出版

方知库
Eco-Environmental
Knowledge Web



中国科学院科学出版基金资助出版

生态学报

(SHENGTAI XUEBAO)

第 41 卷 第 7 期

2021 年 4 月 (半月刊)

目 次

研究论文

- 2001—2018 年中国-老挝交通走廊核心区植被稳定性对极端干旱的响应 刘媛媛, 李霞, 王小博, 等 (2537)
- 玉龙雪山地区地表三维温度场时空变化分析 谢俊峰, 莫凡, 奚绍礼, 等 (2548)
- 黄土高原植被恢复与生态系统土壤保持服务价值增益研究——以延河流域为例 朱青, 周自翔, 刘婷, 等 (2557)
- 面向湖泊生态系统健康维护的生态管控分区研究——以红枫湖流域为例 蒋啸, 周旭, 肖杨, 等 (2571)
- 基于 CVOR 和电路理论的讨赖河流域生态安全评价及生态格局优化 潘竟虎, 王云 (2582)
- 基于生态系统服务重要性和环境敏感性的喀斯特山区生态安全格局构建——以广西河池为例 高梦雯, 胡业翠, 李向, 等 (2596)
- 基于适应性循环理论的区域生态风险时空演变评估——以长江三角洲城市群为例 李嘉艺, 孙聰, 郑曦 (2609)
- 上海市湿地景观格局时空演变与驱动机制的量化研究 易阿岚, 王钧 (2622)
- 城市主城区立体模型的构建与风环境模拟——以广州主城区为例 孙武, 沈子桐, 乔志强, 等 (2632)
- 广州市主城区城市地形类型与风环境评价 欧阳睿康, 孙武, 陈敏, 等 (2642)
- 若尔盖高原沼泽湿地 CO₂ 排放时空变化特征 周文昌, 崔丽娟, 王义飞, 等 (2652)
- 若尔盖高原泥炭沼泽湿地土壤细菌群落空间分布及其驱动机制 王好才, 夏敏, 刘圣恩, 等 (2663)
- 北京山区侧柏林坡面土壤水分时空动态及其影响因素 沈晗悦, 信忠保, 王志杰 (2676)
- 改变凋落物输入对川西亚高山天然次生林土壤呼吸的影响 李亚非, 胡宗达, 余昊, 等 (2687)
- 川西亚高山三种森林恢复途径对土壤生物有效磷的影响 陈健, 刘顺, 史作民, 等 (2698)
- 凋落物对土壤有机碳与微生物功能多样性的影响 王利彦, 周国娜, 朱新玉, 等 (2709)
- 控制降水梯度对荒漠草原优势植物叶功能性状及土壤养分的影响 吴旭东, 季波, 何建龙, 等 (2719)
- 新疆两种土地利用方式下土壤病毒的群落组成与功能特征 毕丽, 杜帅, 于丹婷, 等 (2728)
- 喀斯特地区土壤温度变化特征及其与环境因子的关系 母娅霆, 刘子琦, 李渊, 等 (2738)
- 覆盖模式对旱作农田土壤微生物多样性及群落结构的影响 刘子涵, 黄方园, 黎景来, 等 (2750)
- 有机肥和植被去除管理对人工林土壤节肢动物多样性的影响 李媛媛, 廖家辉, 许子乾, 等 (2761)
- 亚热带森林凋落叶分解过程土壤节肢动物群落的变化特征 刘静如, 郭可馨, 谌亚, 等 (2770)
- 亚高山草地土壤原生生物群落结构和多样性海拔分布格局 罗正明, 刘晋仙, 周妍英, 等 (2783)
- 吉林蛟河针阔混交林功能性状分布格局及其对地形因素的响应 夏梦洁, 王晓霞, 郝珉辉, 等 (2794)

生物炭对褐土旱地玉米季氮转化功能基因、丛枝菌根真菌及 N ₂ O 释放的影响	刘 领,马宜林,悦飞雪,等 (2803)
温度和光周期协同作用对蒙古栎幼苗春季物候的影响	胡明新,周广胜,吕晓敏,等 (2816)
燕山山脉黄檗种群结构与动态特征	王泳腾,黄治昊,王 俊,等 (2826)
兴安落叶松 (<i>Larix gmelinii</i>) 火后种子萌发影响因子	王 炎,齐 麟,周 莉,等 (2835)
不同密度猪毛菜形态结构性状及生物量分配策略的异速关系	郑 伟,范高华,黄迎新,等 (2845)
闽楠叶片功能性状及表型可塑性对其与杉木混交响应	孙嘉伟,罗丽莹,李淑英,等 (2855)
川金丝猴秦岭与岷山社群社会结构与空间分布差异性比较	朱紫瑞,王程亮,王晓卫,等 (2867)
松嫩平原苍鹭秋季栖息地选择及适宜性分布	孙雪莹,李祎斌,吴庆明,等 (2877)
高阶相互作用对宿主-寄生群落动态的影响	高志灵,苏 敏,江正俊 (2886)
3 种无脊椎动物对近江牡蛎 <i>Crassostrea ariakensis</i> 和熊本牡蛎 <i>C. sikamea</i> 的捕食研究	孙兆跃,范瑞良,隋延鸣,等 (2895)

专论与综述

城市蓝绿基础设施降温效应研究综述	苏王新,常 青,刘 筱,等 (2902)
气候变化、土地退化和粮食安全问题:关联机制与解决途径	陈睿山,郭晓娜,熊 波,等 (2918)

期刊基本参数:CN 11-2031/Q * 1981 * m * 16 * 394 * zh * P * ¥ 90.00 * 1510 * 36 * 2021-04



封面彩图提供:刘国华 中国科学院生态环境研究中心 E-mail: ghliu@rcees.ac.cn

ACTA ECOLOGICA SINICA Vol.41, No.7 April, 2021 (Semimonthly)

CONTENTS

Research Paper

- Vegetation stability in response to extreme droughts from 2001 to 2018 in the core area of China-Laos transportation corridors
..... LIU Yuanyuan, LI Xia, WANG Xiaobo, et al (2537)
- Spatial and temporal variation of 3D temperature field in Yulong Snow Mountain area
..... XIE Junfeng, MO Fan, XI Shaoli, et al (2548)
- Vegetation restoration and ecosystem soil conservation service value increment in Yanhe Watershed, Loess Plateau
..... ZHU Qing, ZHOU Zixiang, LIU Ting, et al (2557)
- Ecological space zoning based on lake ecosystem health maintenance: taking the Hongfeng Lake basin as example
..... JIANG Xiao, ZHOU Xu, XIAO Yang, et al (2571)
- Ecological security evaluation and ecological pattern optimization in Taolai River Basin based on CVOR and circuit theory
..... PAN Jinghu, WANG Yun (2582)
- Construction of ecological security pattern based on the importance of ecosystem services and environmental sensitivity in karst
mountainous areas; a case study in Hechi, Guangxi GAO Mengwen, HU Yecui, LI Xiang, et al (2596)
- Assessment of spatio-temporal evolution of regionally ecological risks based on adaptive cycle theory: a case study of Yangtze
River Delta urban agglomeration LI Jiayi, SUN Cong, ZHENG Xi (2609)
- Quantitative study on spatio-temporal evolution and mechanisms of wetland landscape patterns in Shanghai
..... YI Alan, WANG Jun (2622)
- Construction of the three-dimensional model and simulation of the wind field in central urban districts: A case study of Guangzhou
central urban districts SUN Wu, SHEN Zitong, QIAO Zhiqiang, et al (2632)
- Urban terrain types and evaluation of wind environment in the main urban area of Guangzhou
..... OUYANG Ruikang, SUN Wu, CHEN Min, et al (2642)
- Temporal and spatial variability of ecosystems CO₂ emissions in the Zoigê Plateau marsh
..... ZHOU Wenchang, CUI Lijuan, WANG Yifei, et al (2652)
- Spatial distribution and driving mechanism of soil bacterial communities in the wetland of Zoige plateau
..... WANG Haocai, XIA Min, LIU Shengen, et al (2663)
- Spatial and temporal dynamics of soil moisture and its influencing factors on the slope of *Platycladus orientalis* in Beijing
mountain area SHEN Hanyue, XIN Zhongbao, WANG Zhijie (2676)
- Effects of litter manipulation on soil respiration in natural secondary forest in subalpine area of western Sichuan Province,
China LI Yafei, HU Zongda, YU Hao, et al (2687)
- Effects of three forest restoration pathways on soil biologically based phosphorus in the subalpine of western Sichuan
..... CHEN Jian, LIU Shun, SHI Zuomin, et al (2698)
- Effects of litter on soil organic carbon and microbial functional diversity ... WANG Liyan, ZHOU Guona, ZHU Xinyu, et al (2709)
- The effects of precipitation gradient control on the leaf functional traits and soil nutrients of the dominant plants in a desert steppe ...
..... WU Xudong, JI Bo, HE Jianlong, et al (2719)
- Compositional and functional characteristics of viruses in soil under two types of land-use in Xinjiang, China
..... BI Li, DU Shuai, YU Danting, et al (2728)
- Characteristics of soil temperature variation in karst area and its relationship with environmental factors
..... MU Yating, LIU Ziqi, LI Yuan, et al (2738)
- Effects of farmland mulching patterns on soil microbial diversity and community structure in dryland
..... LIU Zihan, HUANG Fangyuan, LI Jinglai, et al (2750)
- Effects of organic fertilizer application and understory plant removal on the diversity of soil arthropods in poplar plantations
..... LI Yuanyuan, LIAO Jiahui, XU Ziqian, et al (2761)

Changes of soil arthropod community during litter decomposition in a subtropical forest	LIU Jingru, GUO Kexin, SHENG Ya, et al (2770)
Community structures and diversity patterns of the soil protist communities along an altitudinal gradient in a subalpine grassland	LUO Zhengming, LIU Jinxian, ZHOU Yanying, et al (2783)
Distribution pattern of functional traits and its response to topographic factors in a conifer and broad-leaved mixed forest in Jiaohe, Jilin province	XIA mengjie, WANG Xiaoxia, HAO Minhui, et al (2794)
Effects of biochar on nitrogen transformation functional genes abundances, arbuscular mycorrhizal fungi and N ₂ O emission of rainfed maize season in cinnamon soil	LIU Ling, MA Yilin, YUE Feixue, et al (2803)
Interactive effects of different warming and changing photoperiod on spring phenology of <i>Quercus mongolicus</i> seedlings	HU Mingxin, ZHOU Guangsheng, LÜ Xiaomin, et al (2816)
The population structure and dynamic characteristics of <i>Phellodendron amurense</i> in Yanshan Mountains	WANG Yongteng, HUANG Zhihao, WANG Jun, et al (2826)
A study on the influencing factors of <i>Larix gmelinii</i> post-fire seed germination	WANG Yan, QI Lin, ZHOU Li, et al (2835)
Allometric relationships between the morphological traits and biomass allocation strategies of <i>Salsola collina</i> under different population density	ZHENG Wei, FAN Gaohua, HUANG Yingxin, et al (2845)
Response of <i>Phoebe bournei</i> leaf functional traits and phenotypic plasticity to its mixture with the Chinese fir	SUN Jiawei, LUO Liying, LI Shuying, et al (2855)
The troop variation in social structure and spatial distribution of golden snub-nosed monkeys (<i>Rhinopithecus roxellana</i>) between the Qinling and Minshan Mountains, China	ZHU Zirui, WANG Chengliang, WANG Xiaowei, et al (2867)
Habitat suitability assessment and habitat selection of the Grey heron (<i>Ardea cinerea</i>) during autumn in Songnen Plain, China	SUN Xueying, LI Yibin, WU Qingming, et al (2877)
Effect of higher-order interactions on the community dynamics of host-parasite system	GAO Zhiling, SU Min, JIANG Zhengjun (2886)
Predation of the sumonie oyster <i>Crassostrea ariakensis</i> and the Kumamoto oyster <i>C. sikamea</i> by three invertebrate species in lab experiments	SUN Zhaoyue, FAN Ruiliang, SUI Yanming, et al (2895)
Review and Monograph	
Cooling effect of urban green and blue infrastructure: a systematic review of empirical evidence	SU Wangxin, CHANG Qing, LIU Xiao, et al (2902)
Climate change, land degradation and food insecurity: linkages and potential solutions	CHEN Ruishan, GUO Xiaona, XIONG Bo, et al (2918)

《生态学报》2021 年征订启事

《生态学报》是由中国科学技术协会主管,中国生态学学会、中国科学院生态环境研究中心共同主办的生态学高级专业学术期刊,创刊于 1981 年,报道生态学领域前沿理论和原始创新性研究成果。坚持“百花齐放,百家争鸣”的方针,依靠和团结广大生态学科工作者,探索生态学奥秘,为生态学基础理论研究搭建交流平台,促进生态学研究发展,为我国培养和造就生态学科人才和知识创新服务、为国民经济建设和发展服务。

《生态学报》主要报道生态学重要基础理论和应用研究的原始创新性科研成果。主要刊载文章类型有:研究综述;研究论文;学术信息与动态,生态学新理论、新方法、新技术介绍;新书评介及开放实验室介绍等。欢迎广大科技工作者、科研单位、高等院校、图书馆等订阅。

《生态学报》半月刊,大 16 开本,280 页,国内定价 90 元/册,全年定价 2160 元。

办公电话: 010-62941099, 010-62843362

E-mail: shengtaixuebao@rcees.ac.cn

投稿网址: www.ecologica.cn

执行副主编 孔红梅 责任编辑 刘昕 全元 谢武双 于恩逸 朱晶莹 编辑 宗静 彭小琼

生态学报
(SHENGTAI XUEBAO)
(半月刊 1981 年 3 月创刊)
第 41 卷 第 7 期 (2021 年 4 月)

ACTA ECOLOGICA SINICA
(Semimonthly, Started in 1981)
Vol. 41 No. 7 (April, 2021)

编辑 《生态学报》编辑部
地址:北京海淀区双清路 18 号
邮政编码:100085
电话:(010)62941099
www.ecologica.cn
shengtaixuebao@rcees.ac.cn

主编 傅伯杰
主管 中国科学技术协会
主办 中国生态学学会
中国科学院生态环境研究中心
地址:北京海淀区双清路 18 号
邮政编码:100085

出版 科学出版社
印刷 北京宝昌彩色印刷有限公司
国内发行 全国各地邮局
发行代号 82-7
国外发行 中国国际图书贸易总公司
发行代号 M670
订阅 科学出版社期刊发行部
010-64017032, 010-64017539
或扫描封底二维码
广告经营 京海工商广字第 8013 号

Edited by Editorial board of
ACTA ECOLOGICA SINICA
Add: 18, Shuangqing Street, Haidian, Beijing 100085, China
Tel: (010) 62941099
www.ecologica.cn
shengtaixuebao@rcees.ac.cn

Editor-in-chief FU Bojie
Supervised by China Association for Science and Technology
Sponsored by Ecological Society of China
Research Center for Eco-environmental Sciences, CAS
Add: 18, Shuangqing Street, Haidian, Beijing 100085, China

Published by Science Press
Add: 16 Donghuangchenggen North Street,
Beijing 100717, China

Printed by Beijing Baochang Color Printing Co., Ltd,
Beijing 100094, China

Subscribe by Science Press
Tel: 010-64017032, 010-64017539
E-mail: journal@cspg.net

Domestic issue All Local Post Offices in China 82-7
Foreign issue China International Book Trading Corporation M670
Add: P.O.Box 399 Beijing 100044, China



ISSN 1000-0933

CN 11-2031/Q

定价 90.00 元