



生态学报

ACTA ECOLOGICA SINICA

第36卷 第8期 Vol. 36 No. 8 2016

ISSN 1000-0933 CN 11-2031/Q



中国生态学学会
中国科学院生态环境研究中心
万方数据
主办



科学出版社
出版
Science Press

ACTA ECOLOGICA SINICA Vol.36, No.8 April, 2016(Semimonthly)
CONTENTS

Review and Monograph

- A review on the methods for measuring total microbial activity in soils CHE Rongxiao, WANG Fang, WANG Yanfen, et al (2103)

- Influence of afforestation, reforestation, forest logging, climate change, CO₂ concentration rise, fire, and insects on the carbon sequestration capacity of the forest ecosystem LIU Weiwei, WANG Xiaoke, LU Fei, et al (2113)

Research Paper

- Effects of drainage on soil organic carbon stock in the Zoige peatlands, eastern Qinghai-Tibetan Plateau ZHOU Wenchang, SUOLANG Duoerji, CUI Lijuan, et al (2123)

- Spatial distribution of soil nitrogen in an urban-rural fringe and its influencing factors CHEN Qingsong, Li Ting, ZHANG Shirong, et al (2133)

- Effects of nitrogen addition on carbon exchange in a typical steppe in Inner Mongolia YOU Chengming, HU Zhongmin, GUO Qun, et al (2142)

- The process of energy-related carbon emissions and influencing mechanism research in Xinjiang WANG Changjian, WANG Fei, ZHANG Hong'ou (2151)

- Modeling evapotranspiration and its components in qianyanzhou plantation based on modified SW model SHEN Jing, ZHANG Mi, XIAO Wei, et al (2164)

- Altitudinal variation in the covariation of stomatal traits with leaf functional traits in Changbai Mountain WANG Ruili, YU Guirui, HE Nianpeng, et al (2175)

- $\delta^{15}\text{N}$ in fine roots of *Cunninghamia lanceolata* plantations of different ages and implications for soil nitrogen cycling rates ZHENG Lujia, HUANG Zhiqun, HE Zongming, et al (2185)

- Geographic variation in growth and reproduction of *Rosa soulieana* in the dry valleys of the Hengduan Mountain region ZHOU Zhiqiong, BAO Weikai (2192)

- Modeling stem and branch biomass of *Tamarix* spp. in the marine protected area in Changyi, China WANG Wei, WANG Baodong, XU Zongjun, et al (2202)

- The applicability of leaf area index estimation model in an aspen forest over a growth period WANG Yan, TIAN Qingjiu, WANG Qi, et al (2210)

- Response of soil seed banks to invasion by *Echinochloa caudata* in restored *Scirpus planiculmis* wetlands in the Momoge National Nature Reserve LIU Bo, LÜ Xianguo, JIANG Ming, et al (2217)

- Effects of climate, forest type and light availability on litter decomposition rate in forests of Northeast China WU Peng, WANG Xiangping, ZHANG Xinpeng, et al (2223)

- Allelopathy of extracts from the pioneer population, *Artemisia capillaries*, during succession of the herbaceous community in the hilly-gully region of Loess Plateau SUN Qinghua, ZHANG Chao, LIU Guobin, et al (2233)

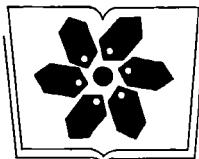
- Effects of old bamboo forests and relevant management measures on growth of new bamboo forests LI Chong, ZHOU Guomo, SHI Yongjun, et al (2243)

- Spatial heterogeneity of soil physical properties in *Phyllostachys heterocycla* cv *pubescens* forest, South Sichuan Bamboo Sea GAO Qiangwei, DAI Bin, LUO Chengde, et al (2255)

- An experimental study of Mollisol aggregate loss characteristics during rainfall erosion processes LU Jia, ZHENG Fenli, AN Juan, et al (2264)

- Assessment of farmland landscape multifunctionality at county level in Beijing-Tianjin-Hebei area PENG Jian, LIU Zhicong, LIU Yanxu, et al (2274)

Tempo-spatial variation of larval and juvenile fish communities in a sandy surf zone on Si Jiao Island	MAO Chengze, ZHONG Junsheng, HUA Weihua, et al (2286)
Evaluationon utilization state of marine fishery resources of Pacific Islands based on catch statistics	DING Qi, CHEN Xinjun, GENG Ting, et al (2295)
Dietary composition of assamese macaques (<i>Macaca assamensis</i>) inhabiting a limestone forest during the rainy season	HUANG Zhonghao, TANG Huaxing, LIU Shengyuan, et al (2304)
Estimating population density of small rodents using camera traps	LI Xinhai, YU Jiajie, ZHANG Peng, et al (2311)
Feeding preference of <i>Gynaephora menyuanensis</i> and its relationships with plant carbon and nitrogen contents in an alpine meadow on the Tibetan plateau	ZHENG Lili, SONG Minghua, YIN Tanfeng, et al (2319)
Effects of alpine meadow degradation on soil insect diversity in the Qinghai-Tibetan Plateau	GAO Yanmei, WU Pengfei (2327)
Genetic diversity and population history among geographic populations of <i>Spodoptera exigua</i> in North China based on mtDNA <i>Cytb</i> gene sequences	WANG Xingya, ZHOU Lihong (2337)
Effects of precipitation on the distribution of colorado potato beetle, <i>Leptinotarsa decemlineata</i> , in Xinjiang	LI Chao, LIU Huai, GUO Wenchao, et al (2348)
Effects of biochar and biochar-based ammonium nitrate fertilizers on soil microbial biomass carbon and nitrogen and enzyme activities	ZHAO Jun, GENG Zengchao, SHANG Jie, et al (2355)
Soil microbial properties under typical halophytic vegetation communities in arid regions	WANG Jingya, WANG Mingliang, ZHANG Fenghua (2363)
Influence of crop rotation on enzyme activities and fungal communities in flue-cured tobacco soil	CHEN Danmei, DUAN Yuqi, YANG Yuhong, et al (2373)
Chemical characteristics of PM _{2.5} in Beijing	WANG Zhanshan, LI Yunting, LIU Baoxian, et al (2382)
Reconstructions and simulations of nutrient evolution in Poyang Lake over the past 300 years	LIAO Mengna, YU Ge, GUO Ya (2393)
Sustainable development assessment based on NLPCA-GSO: a case study of the Bohai Rim region	TAN Feifei, LU Zhaohua (2403)
Calculation and dynamic analysis of the food nitrogen footprints of urban and rural residents in Beijing	XIAN Chaofan, OUYANG Zhiyun (2413)
Beneficiary analysis and ecological production function to measure lake ecosystem services for decision-making in China	JIANG Bo, Christina P. WONG, OUYANG Zhiyun (2422)
Coastal ecosystem services and their spatial-temporal variation in Haikou, China	YU Lulu, ZHANG Xiaoxiang, LI Yangfang, et al (2431)



中国科学院科学出版基金资助出版

生态学报 (SHENTAI XUEBAO)

第 36 卷 第 8 期 2016 年 4 月 (半月刊)

目 次

专论与综述

- 土壤微生物总活性研究方法进展 车荣晓, 王 芳, 王艳芬, 等 (2103)
造林再造林、森林采伐、气候变化、CO₂浓度升高、火灾和虫害对森林固碳能力的影响
..... 刘魏魏, 王效科, 遂 非, 等 (2113)

研究论文

- 排水对若尔盖高原泥炭地土壤有机碳储量的影响 周文昌, 索郎夺尔基, 崔丽娟, 等 (2123)
城乡交错带土壤氮素空间分布及其影响因素 陈青松, 李 婷, 张世熔, 等 (2133)
氮添加对内蒙古温带典型草原生态系统碳交换的影响 游成铭, 胡中民, 郭 群, 等 (2142)
新疆能源消费碳排放过程及其影响因素——基于扩展的 Kaya 恒等式 王长建, 汪 菲, 张虹鸥 (2151)
基于改进 SW 模型的千烟洲人工林蒸散组分拆分及其特征 沈 竞, 张 弥, 肖 薇, 等 (2164)
气孔特征与叶片功能性状之间关联性沿海拔梯度的变化规律——以长白山为例
..... 王瑞丽, 于贵瑞, 何念鹏, 等 (2175)
不同林龄杉木人工林细根氮稳定同位素组成及其对氮循环的指示 郑璐嘉, 黄志群, 何宗明, 等 (2185)
横断山区干旱河谷川滇蔷薇生长与繁殖特征的地理空间差异 周志琼, 包维楷 (2192)
昌邑海洋保护区柽柳灌丛枝干生物量估算方法 王 炜, 王保栋, 徐宗军, 等 (2202)
杨树林全生长期 LAI 遥感估算模型适用性 王 巍, 田庆久, 王 琦, 等 (2210)
莫莫格扁秆藨草恢复湿地土壤种子库对长芒稗入侵的响应 刘 波, 吕宪国, 姜 明, 等 (2217)
东北地区森林凋落叶分解速率与气候、林型、林分光照的关系 吴 鹏, 王襄平, 张新平, 等 (2223)
黄土丘陵区草本群落演替中先锋种群菌陈蒿浸提液的化感作用 孙庆花, 张 超, 刘国彬, 等 (2233)
毛竹林老竹水平和经营措施对新竹发育质量的影响 李 艸, 周国模, 施拥军, 等 (2243)
蜀南竹海毛竹林土壤物理性质空间异质性 高强伟, 代 斌, 罗承德, 等 (2255)
降雨侵蚀过程中黑土团聚体流失特征 卢 嘉, 郑粉莉, 安 娟, 等 (2264)
京津冀地区县域耕地景观多功能性评价 彭 建, 刘志聪, 刘焱序, 等 (2274)
泗礁沙滩碎波带仔稚鱼群落结构的时空变化 毛成责, 钟俊生, 花卫华, 等 (2286)
基于渔获统计的太平洋岛国渔业资源开发利用现状评价 丁 琦, 陈新军, 耿 婷, 等 (2295)
喀斯特石山生境中熊猴的雨季食物组成 黄中豪, 唐华兴, 刘晟源, 等 (2304)
应用红外相机监测结果估计小型啮齿类物种的种群密度 李欣海, 于家捷, 张 鹏, 等 (2311)
青藏高原高寒草甸门源草原毛虫取食偏好及其与植物 C、N 含量的关系
..... 郑莉莉, 宋明华, 尹潭凤, 等 (2319)
高寒草甸退化对土壤昆虫多样性的影响 高艳美, 吴鹏飞 (2327)

- 基于 mtDNA *Cytb* 基因序列的我国北方地区甜菜夜蛾遗传多样性与种群历史分析 王兴亚,周俐宏 (2337)
降水对新疆马铃薯甲虫分布的影响 李超,刘怀,郭文超,等 (2348)
生物炭及炭基硝酸铵对土壤微生物量碳、氮及酶活性的影响 赵军,耿增超,尚杰,等 (2355)
干旱区典型盐生植物群落下土壤微生物群落特征 王静娅,王明亮,张凤华 (2363)
轮作模式对植烟土壤酶活性及真菌群落的影响 陈丹梅,段玉琪,杨宇虹,等 (2373)
北京市 PM_{2.5} 化学组分特征 王占山,李云婷,刘保献,等 (2382)
300 年来鄱阳湖营养盐演化重建与模拟 廖梦娜,于革,郭娅 (2393)
基于 NLPCA-GSO 可持续发展评价——以环渤海区域为例 檀菲菲,陆兆华 (2403)
城乡居民食物氮足迹估算及其动态分析——以北京市为例 冼超凡,欧阳志云 (2413)
湖泊生态服务受益者分析及生态生产函数构建 江波,Christina P. Wong,欧阳志云 (2422)
海口市海岸带生态系统服务及其时空变异 喻露露,张晓祥,李杨帆,等 (2431)

学术信息与动态

- 基于文献计量分析的生态修复现状研究 曹永强,郭明,刘思然,等 (2442)
期刊基本参数:CN 11-2031/Q * 1981 * m * 16 * 348 * zh * P * ¥ 90.00 * 1510 * 37 * 2016-04



封面彩图提供: 王迎 首都医科大学 E-mail: lwym4@sohu.com

《生态学报》2016 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研工作者,探索生态学奥秘,为生态学基础理论研究搭建交流平台,促进生态学研究深入发展,为我国培养和造就生态学科研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》主要报道生态学及各分支学科的重要基础理论和应用研究的原始创新性科研成果。特别欢迎能反映现代生态学发展方向的优秀综述性文章;研究简报;生态学新理论、新方法、新技术介绍;新书评价和学术、科研动态及开放实验室介绍等。

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

国内邮发代号:82-7,国外邮发代号:M670

标准刊号:ISSN 1000-0933 CN 11-2031/Q

全国各地邮局均可订阅,也可直接与编辑部联系购买。欢迎广大科技工作者、科研单位、高等院校、图书馆等订阅。

通讯地址:100085 北京海淀区双清路18号 电 话:(010)62941099; 62843362

E-mail: shengtaixuebao@rcees.ac.cn 网 址: www.ecologica.cn

执行副主编 孔红梅 责任编辑 段 靖 刘 昕

生 态 学 报
(SHENGTAI XUEBAO)
(半月刊 1981年3月创刊)
第36卷 第8期 (2016年4月)

ACTA ECOLOGICA SINICA
(Semimonthly, Started in 1981)
Vol. 36 No. 8 (April, 2016)

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
地址:北京东黄城根北街16号
邮政编码:100717

印 刷 行 北京北林印刷厂
地 址:东黄城根北街16号
邮 政 编 码:100717
电 话:(010)64034563
E-mail:journal@cspg.net

订 购 国内各地邮局
国外发行 中国国际图书贸易总公司
地 址:北京399信箱
邮 政 编 码:100044

广 告 经 营 京海工商广字第8013号
许 可 证

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 Bei Lin Printing House,
Beijing 100083, China

Distributed by Science Press
Add: 16 Donghuangchenggen North
Street, Beijing 100717, China
Tel: (010) 64034563
E-mail: journal@cspg.net

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

ISSN 1000-0933
0.8
9 771000093163

ISSN 1000-0933
CN 11-2031/Q

国内外公开发行

国内邮发代号 82-7

国外发行代号 M670

定价 90.00 元