

ISSN 1001-4675

干旱区研究

ARID ZONE RESEARCH

3

2022年5月

第39卷

Vol. 39 No. 3

- 中国科学引文数据库
- 中国科技论文与引文数据库
- 中国学术期刊综合评价数据库
- 中国核心期刊(遴选)数据库
- 中国期刊全文数据库
- 中国学术期刊(光盘版)
- Scopus 数据库



主办/Sponsored by



中国科学院新疆生态与地理研究所

Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences



中国土壤学会

Soil Science Society of China

出版/Published by



科学出版社

Science Press

干旱区研究

第三十九卷

第三期

二零二二年五月

科学出版社

干 旱 区 研 究

GANHANQU YANJIU

第39卷 第3期 2022年5月

目 次

泛第三极环境与绿色丝路

全新世西风模态下中亚干旱区孢粉类型多样性变化特征——以阿尔泰山为例 张东良(667)

中亚高山冰川表面高程变化时序重建 都伟冰,张世琼,李均力,等(676)

1979—2017年CRU、ERA5、CMFD格点降水数据在青藏高原适用性评估 温婷婷,郭英香,董少睿,等(684)

中亚草地NPP时空动态及其驱动因素研究 张贊鑫,郝海超,范连连,等(698)

天气与气候

过去近60 a黄河流域降水时空变化特征及未来30 a变化趋势 王澄海,杨金涛,杨 凯,等(708)

基于SPEI的黄河流域多尺度干湿特征分析 高秉丽,巩 杰,李 炎,等(723)

基于CEEMD的LSTM和ARIMA模型干旱预测适用性研究——以新疆为例 丁 严,许德合,曹连海,等(734)

近60 a石羊河流域蒸发量变化及其原因分析 李小琴,冉 宸,张晓霞,等(745)

降水梯度对青海湖河源湿地温室气体排放日变化的影响 杨紫唯,车子涵,刘芙蓉,等(754)

陕西省冰雹气候变化特征及其关键影响因素分析 马荣君,李潇斐,毛彦霖,等(767)

水资源及其利用

基于Landsat影像的柴达木盆地湖泊提取方法 文广超,李 兴,吴冰洁,等(774)

基于GRACE和GLDAS的西北干旱区地下水资源量可持续性评价 阮永健,吴秀芹(787)

基于博弈论组合赋权的洪水风险评价——以武威地区为例 苏广全,吕海深,朱永华,等(801)

新疆自来水中氢氧稳定同位素时空变化 夏怡洁,王圣杰,张明军(810)

香日德-柴达木河流域水体氢氧稳定同位素特征及影响因素研究 何启欣,曹广超,曹生奎,等(820)

博尔塔拉河上游河谷地区水化学特征及水质评价 丁启振,雷 米,周金龙,等(829)

节水改造前后永济灌域地下水环境时空变化特征 崔佳琪,李仙岳,史海滨,等(841)

植物与植物生理

陇东地区油污土壤紫花苜蓿(*Medicago sativa*)和金鸡菊(*Coreopsis lanceolata*)——植物修复效应比较 井明博,王金成,张 威,等(853)

准噶尔盆地大赖草分布格局及关键因子分析 张 林,张云玲,马松梅,等(863)

石羊河下游人工梭梭林健康评价体系构建及应用研究 李雪宁,徐先英,郑桂恒,等(872)

南疆盆地亏缺灌溉和覆膜对油莎豆生物量及产量的影响 丁 雅,杨建明,李 利,等(883)

干旱对碧玉杨幼苗水氮利用与同化物分配的影响 尚佳州,赵瑜琦,王卫锋,等(893)

沙柳直根抗拉特性对循环荷载的响应 胡晶华,刘 静,白潞翼,等(900)

咸水滴灌对肉苁蓉寄生体系盐离子分配及品质的影响 刘 玲,罗剑洪,李丙文,等(908)

土壤与生态

河套灌区西部土壤盐渍化分异特征及其主控因素 苏春利,纪倩楠,陶彦臻,等(916)

库布齐沙漠东部植被恢复对土壤生态化学计量的影响 刘 源,李晓晶,段玉玺,等(924)

红砂灌丛沙堆土壤粒度组成及养分积累特征 李小乐,魏亚娟,党晓宏,等(933)

基于RSEI的延河流域生态环境质量监测与预估 王丽霞,赵 蕊,刘 招,等(943)

近25 a来甘肃省耕地资源时空变化及其影响因子 侯青青,陈 英,裴婷婷,等(955)

汾河流域土地利用变化及生态环境效应 苏迎庆,张恩月,刘 源,等(968)

其他

6种牧草苗期耐旱性综合评价 田小霞,卫晓峰,魏 浩,等(978)

氮肥后移对花铃期水分亏缺棉花产量的补偿效应研究 代健敏,何庆雨,谢 玲,等(986)

责任编辑: 何晓玲

封面照片: 张海燕摄影

期刊基本参数: CN65-1095/X*1984*b*A4*330*zh*P* ¥ 70.00*300*32*2022-05

Arid Zone Research
Vol. 39 No. 3 May 2022
Contents

Pan-Third Pole Environment and Green Silk Road

- Changes of pollen taxa diversity in the arid Central Asia under the Holocene Westerlies Mode: A case study of the Altai Mountains ZHANG Dongliang(675)
Temporal reconstruction of alpine glacier surface elevation variation in Central Asia DU Weibing, ZHANG Shiqiong, LI Junli, et al(683)
Assessment of CRU, ERA5, CMFD grid precipitation data for the Tibetan Plateau from 1979 to 2017 WEN Tingting, GUO Yingxiang, DONG Shaorui, et al(697)
Study on spatio-temporal dynamics and driving factors of NPP in Central Asian grassland ZHANG Yunxin, HAO Haichao, FAN Lianlian, et al(707)

Weather and Climate

- Changing precipitation characteristics in the Yellow River Basin in the last 60 years and tendency prediction for next 30 years WANG Chenghai, YANG Jintao, YANG Kai, et al(722)
Analysis of multi-scalar characteristics of dry and wet conditions in the Yellow River Basin based on SPEI GAO Bingli, GONG Jie, LI Yan, et al(733)
Applicability of the LSTM and ARIMA model in drought prediction based on CEEMD: A case study of Xinjiang DING Yan, XU Dehe, CAO Lianhai, et al(744)
Analysis of change and causes of evaporation for the Shiyang River Basin during the past 60 years LI Xiaoqin, RAN Chen, ZHANG Xiaoxia, et al(753)
Precipitation gradient influence on daily greenhouse gas emission fluxes from a Qinghai Lake wetland YANG Ziwei, CHE Zihan, LIU Fumei, et al(766)
Characteristics and causes of climate change in hail in occurrence Shaanxi Province MA Rongjun, LI Xiaofei, MAO Yanlin, et al(773)

Water Resources and Utilization

- An automatic method for delineating lake surfaces in Qaidam Basin using Landsat images WEN Guangchao, LI Xing, WU Bingjie, et al(786)
Evaluation of groundwater resource sustainability based on GRACE and GLDAS in arid region of Northwest China RUAN Yongjian, WU Xiuqin(800)
Combined weight method based on game theory for flood risk assessment in the Wuwei Region SU Guangquan, LYU Haishen, ZHU Yonghua, et al(809)
Spatiotemporal variations of stable hydrogen and oxygen isotopes in Xinjiang tap water XIA Yijie, WANG Shengjie, ZHANG Mingjun(819)
Hydrogen-oxygen isotope characteristics of water bodies in the Xiangrige-Qaidam River Basin and its influencing factors HE Qixin, CAO Guangchao, CAO Shengkui, et al(828)
An assessment of groundwater, surface water, and hydrochemical characteristics in the upper valley of the Bortala River DING Qizhen, LEI Mi, ZHOU Jinlong, et al(840)
Temporal and spatial variation change of groundwater environment in the salinized irrigation districts under the background of water-saving reconstruction CUI Jiaqi, LI Xianyue, SHI Haibin, et al(852)

Plant and Plant Physiology

- Comparison of phytoremediation effects of *Medicago sativa* and *Coreopsis basalis* on crude-oil-contaminated soil in eastern Gansu Province JING Mingbo, WANG Jincheng, ZHANG Wei, et al(862)
Distribution pattern and driving mechanisms of the sand plant *Leymus racemosus* in the Junggar Basin ZHANG Lin, ZHANG Yunling, MA Songmei, et al(871)
A health evaluation of a *Haloxylon ammodendron* plantation in the Shiyang River lower reaches LI Xuening, XU Xianying, ZHENG Guiheng, et al(882)
Effects of deficit irrigation and film mulching on biomass and production of *Cyperus esculentus* in the southern Xinjiang Basin DING Ya, YANG Jianming, LI Li, et al(892)
Response of drought on water and nitrogen utilization and carbohydrate distribution of *Populus × euramericana* 'Biyu' cuttings SHANG Jiazhou, ZHAO Yuqi, WANG Weifeng, et al(899)

- Straight root tensile properties of *Salix psammophila* in response to cyclic loading HU Jinghua, LIU Jing, BAI Luyi, et al(907)
Effect of saline water drip irrigation on salt ions distribution for the *Haloxylon ammodendron-Cistanche deserticola* association (H-C association) and quality of *Cistanche deserticola* Ma LIU Ling, LUO Jianhong, LI Bingwen, et al(915)

Soil and Ecology

- Differentiation characteristics and main influencing factors of soil salinization in the West of Hetao Irrigation Area SU Chunli, JI Qiannan, TAO Yanzhen, et al(923)
Effects of vegetation restoration on soil stoichiometry in the eastern Hobq Desert LIU Yuan, LI Xiaojing, DUAN Yuxi, et al(932)
Soil mechanical composition and soil nutrient content of *Reaumuria soongorica* nebkhlas LI Xiaole, WEI Yajuan, DANG Xiaohong, et al(942)
Monitoring and prediction of ecological environmental quality in the Yanhe River Basin based on the remote sensing ecological index WANG Lixia, ZHAO Rui, LIU Zhao, et al(954)
Analysis of cultivated land's spatio-temporal changes and influencing factors in Gansu Province in recent 25 years HOU Qingqing, CHEN Ying, PEI Tingting, et al(967)
Land-use change and ecological environment effects on Fenhe River Basin SU Yingqing, ZHANG Enyue, LIU Yuan, et al(977)
- Others**
- Comprehensive evaluation of drought tolerance of six forage species at the seedling stage TIAN Xiaoxia, WEI Xiaofeng, WEI Hao, et al(985)
Compensation effect of nitrogen fertilizer post-shift on water-deficient cotton yield at different stages DAI Jianmin, HE Qingyu, XIE Ling, et al(995)