

湖泊科学

(Hupo Kexue)

2023年 第35卷 第2期 3月6日

目次

三峡水库专辑

编者按	(381)
综述	
近20年来三峡水库水动力特性及其水环境效应研究:回顾与展望	(383)
龙良红,黄宇擘,徐慧,纪道斌,赵星星,崔玉洁,杨正健,刘德富	
三峡消落带土壤-植物-微生物作用下的氮循环关键过程研究进展	(398)
李姗泽,王雨春,张家暉,赵建伟,温洁,包宇飞,陈铭	
三峡水库蓄水后库区水沙变化及其生态环境响应特征	(411)
林莉,董磊,潘雄,杨文俊	
三峡水库CO ₂ 、CH ₄ 通量监测分析研究	(423)
李哲,杨柳,吴兴华,陈永柏,鲁伦慧,王殿常	
研究论文	
——生物地球化学与水环境保护	
三峡水库出水断面磷通量及形态研究(1998—2019年)	(435)
娄保锋,欧阳雪姣,杨霞	
基于机器学习的水-气界面CO ₂ 、CH ₄ 扩散通量预测及影响因素分析——以三峡水库为例	(449)
欧阳常悦,秦宇,刘臻,梁越	
三峡库区沉积物还原性无机硫形态的分布特征、控制因素及对内源磷释放的影响	(460)
王耀,茅昌平,贾志敏,王帅,饶文波	
氮和磷是影响三峡库区香溪河表层沉积物中微生物群落结构的主要因素	(473)
朱智杰,陈默,薛思敏,周仕伟,焦一滢,田小方	
藻型湖区氧化亚氮排放特征及其影响因素	(483)
廖远珊,肖启涛,刘臻婧,胡正华,张弥,肖薇,段洪涛	
——富营养化与水华防控	
三峡库区浮游植物群落结构特征及水生态评价	(493)
苏新然,于潘,尤庆敏,庞婉婷,王全喜	
基于非线性时序分析的三峡支流浮游植物因果响应	(507)
何孟奇,闪锐,王兰,杨柳,李哲,尚明生	
分层异重流背景下降雨对三峡水库香溪河水华消退的影响	(519)
陈聿奇,崔玉洁,黄浩昇,张必昊,成再强,纪道斌,龙良红,唐静	
澜沧江梯级水库浮游植物群落结构特征及其关键驱动因子	(530)
张琦,陈宇琛,林育青,陈求稳,张建云,丁珏,马宏海	

青海湖浮游植物群落时空格局及其环境驱动因子	(540)
孙 兴,蒋小明,宋高飞,郑 鹏,张 昆,高海鹏,窦筱艳,艾 雪	
——淡水生态与生物多样性保育	
三峡水库消落区植物群落演变趋势及优势植物适应策略	(553)
张志永,向 林,万成炎,史 方,张道熙,郑志伟,朱 稳,许 盼,袁玉洁,朱利明	
三峡库区与西南库区消落带植物多样性及群落构建比较	(564)
江维薇,杨 楠,肖衡林	
后三峡工程时代的鄱阳湖湿地植被生产力演变	(577)
戴 雪,杨桂山,万荣荣,李彦彦	
三峡库区涪陵江段产漂流性卵鱼类的早期资源及其对水文和水温特征的响应	(586)
杨 志,龚 云,胡 挺,朱其广,金 瑶,曹 俊,唐会元,徐 薇,陈小娟	
近 40 年来太湖梅梁湾底栖动物群落演变特征及驱动因素	(599)
温舒珂,彭 凯,龚志军,秦伯强,蔡永久	
洪泽湖湖滨带浮游动物群落结构及驱动因素	(610)
濮梦圆,徐锦前,胡恺源,彭 凯,龚志军,蔡永久,项贤领	
金沙江支流黑水河松新电站短须裂腹鱼(<i>Schizothorax wangchiachii</i>)过坝后上溯行为	(622)
焦易林,石小涛,许家炜,李冬晴,白天翔,陶 宇,王永猛,孙 干,朱冬舟,柯森繁	
——泥沙冲淤与河床演变	
近 20 年来三峡水库泥沙淤积及其对库区的影响	(632)
袁 晶,许全喜,董炳江,王 涛,杨成刚	
三峡工程运用后长江中游河床调整沿程变化特点	(642)
周美蓉,夏军强,邓珊珊,毛 禹	
三峡工程运用后长江中下游河道冲刷特征及其影响	(650)
许全喜,董炳江,袁 晶,朱玲玲	
金沙江下游梯级水库运行后三峡水库高洪水期入库水沙特性	(662)
高 宇,任 实,王 海,吕超楠,赵汗青	
三峡水库蓄水后上荆江不同河床组成江心洲的演变过程及其机制	(673)
毛 禹,夏军强,周美蓉,邓珊珊	
三峡工程运行后荆江河段分汇段航道水深资源及碍航驱动机制	(684)
杨云平,周良平,张华庆,冯小香,朱玲玲,刘万利,李 明,王建军	
——流域水文与水资源安全	
三峡水库运行前后长江中下游干流及两湖的径流过程变化	(696)
周建银,高 菲,元 媛,黄仁勇,闫 霞	
模拟分析揭示三峡水库成库以来的气候效应:局地 and 近地层,而不是区域	(709)
艾 泽,常 蕊,肖 潺,陈鲜艳,张 强,李 威,李 帅,龚文婷	
基于误差分布估计的三峡水库入库洪水概率预报方法	(722)
张 俊,冯宝飞,牛文静,王 乐,徐雨妮,田逸飞,严方家	
三峡水库香溪水库湾水—气界面热交换过程及水体稳定性	(730)
杨忠勇,张亚超,汤正阳,纪道斌,崔玉洁,李昌文,吴家阳	
逐时降雨概率密度的适用函数与理论密度函数	(743)
沈铁元,向怡衡,廖移山,祁海霞,王俊超,余德康	

(本期责任编辑:梅琴;英文编辑:董旭辉)

Journal of Lake Sciences

(ISSN 1003-5427)

Volume 35 Issue 2; March 6, 2023

Contents

Three Gorges Reservoir Special Issue

Editorial	381
Reviews	
Research on hydrodynamic characteristics and its water eco-environment effects in Three Gorges Reservoir in recent 20 years: Review and prospect	383
Research progress on key processes of nitrogen cycling under soil-plant-microbial interactions in the water-level-fluctuation zone of the Three Gorges Reservoir	398
Water and sediment changes and the eco-environment response characteristics in Three Gorges Reservoir after the impoundment	411
Monitoring and analysis of CO ₂ and CH ₄ fluxes in the Three Gorges Reservoir	423
Research papers	
<i>—Biogeochemistry and aquatic environment protection</i>	
Flux and form of phosphorus in overlying water at the effluent section of the Three Gorges Reservoir from 1998 to 2019	435
Prediction of CO ₂ , CH ₄ diffusion fluxes at the water-air interface and analysis on its influencing factors using machine learning algorithms in the Three Gorges Reservoir	449
Distribution characteristics and controlling factors of reduced inorganic sulfur forms in Three Gorges Reservoir sediment and its influence on the release of endogenous phosphorus	460
Nitrogen and phosphorus major factors shaping microbial community structures in surface sediments in Xiangxi River, Three Gorges Reservoir	473
Nitrous oxide emission and its influencing factors at the cyanobacteria-dominated lake	483
<i>—Eutrophication, bloom prevention and control</i>	
Phytoplankton community structure and water ecological assessment in the Three Gorges Reservoir	493
Nonlinear time-series analysis on the causality response of phytoplankton in a tributary of the Three Gorges Reservoir	507
Rainfall impact on the disappearance of algal blooms in Xiangxi River of Three Gorges Reservoir under stratified density current	519
Characteristic of phytoplankton community structure and its driving factors along the cascade reservoirs in the Lancang River	530

Spatio-temporal patterns of phytoplankton communities and their driving environmental factors in Lake Qinghai	540
— <i>Freshwater ecology and biodiversity conservation</i>	
Evolutionary trend of plant community and adaptive strategies of dominant plants in the water-level-fluctuation zone of the Three Gorges Reservoir	553
Comparison of plant diversity and community assembly between drawdown zone of Three Gorges Reservoir and its southwest reservoir area	564
Vegetation productivity of the Lake Poyang Wetland in the post Three Gorges Dam era	577
Fish resources of the early life history stages in the Fuling section of the Three Gorges Reservoir and their responses to hydrological and thermal characteristics	586
-	
Succession of macrozoobenthic communities and its drivers in Meiliang Bay of Lake Taihu during the past 40 years	599
Community structure and driving factors of zooplankton in the littoral zone of Lake Hongze	610
Upstream behavior of <i>Schizothorax wangchiachii</i> after crossing dams at Songxin Hydropower Station in Heshui River, a tributary of the Jinsha River	622
— <i>Sediment, flushing-siltation and riverbed evolution</i>	
Sediment deposition of Three Gorges Reservoir and its impact on the reservoir area in recent 20 years	632
Longitudinal variation of channel evolution along the middle Yangtze River after the operation of the Three Gorges Project	642
Scouring effect of the middle and lower reaches of the Yangtze River and its impact after the impoundment of the Three Gorges Project	650
Characteristics of incoming runoff and sediment load in the Three Gorges Reservoir during high flood period after the operation of the cascade reservoirs in the lower Jinsha River	662
Evolution process and mechanism of mid-channel bars composed of different bed materials in the Upper Jingjiang Reach after the Three Gorges Project operation	673
Water depth resources and driving mechanism of navigation hindrance of Jingjiang Reach watershed after Three Gorges Project operation	684
— <i>Catchment hydrology and water resources security</i>	
Runoff variation in the middle and lower branches of Yangtze River and the two lakes (Dongting and Poyang Lake) before and after Three Gorges Reservoir's operation	696
Simulated climate effect of the Three Gorges Reservoir after its completion: Within surface and local scope instead of regional	709
Probability forecasting method of Three Gorges Reservoir inflow flood based on error distribution estimation	722
The air-water heat exchange and water vertical stability in the Xiangxi Bay of Three Gorges Reservoir	730
Function applicability to class conditional probability density of hourly rainfall	743