

海洋与湖沼

(Haiyang Yu Huzhao)

第 52 卷

2021 年

总 目 次

第 1 期

棕囊藻属(<i>Phaeocystis</i>)的种类多样性及地理分布特征研究进展	沈萍萍 齐雨藻	(1)
副热带南北太平洋经向模与 ENSO 的关系	鲁云龙 冯俊乔 贾 凡 王庆业	(16)
吕宋海峡不同湍流估算方法的应用对比研究	陈子飞 于 非 王建丰 南 峰 任 强 孙 凡	(27)
黄海浒苔漂移输运和生长消亡过程的数值模拟与预测应用		
	何恩业 季轩梁 高 姍 赵 亮 王玉衡 李 云 杨 静	(39)
两类典型台风路径影响下的黄、渤海海浪场特征研究	李 朝 侯一筠 李水清 李 健	(51)
汕尾市引发灾害性海浪的热带气旋特征研究	殷玉齐 侯一筠 冯兴如 荣增瑞	(66)
海滩修复工程影响下的低能海岸波浪能量时空分布特征研究		
	温昌麒 朱 君 蔡 锋 王立辉 戚洪帅 刘建辉 雷 刚 赵绍华	(75)
基于 ECMWF 数据的中国近海低空波导特征研究	成印河 杨欣坤 张玉生 游志伟	(86)
象山港潮流沉积物有机质分布特征及物源影响分析	徐 皓 冯佰香 李加林 何改丽	(97)
DPQAC-PAC-MC 复合改性粘土在不同介质中的絮凝行为研究		
	吴 婷 曹西华 俞志明 宋秀贤 姜文彬 袁涌铨 吴在兴 贺立燕 范子初	(106)
绿潮迁移过程中环境要素与浒苔藻体生物学特征的相关性分析		
	管 晨 郝 雅 侯承宗 唐学玺 王 影	(114)
苏北浅滩筏架附生绿藻群落结构变化及与环境因子的相关性探究		
	郝 雅 管 晨 侯承宗 唐学玺 王 影	(123)
红沿河海域常见水母的食物组成分析——基于稳定同位素和脂肪酸标记法		
	王俊健 王 楠 王彦涛 王孝程 李超伦	(132)
钦州湾海水和香港牡蛎体内脂溶性贝类毒素污染特征		
	徐轶肖 韦光领 王 玉 贾 樱 高 寒 张 腾 佟蒙蒙	(144)
栉孔扇贝(<i>Chlamys farreri</i>)过氧化物酶体增殖物激活受体基因的鉴定与表达分析		
	隋明益 杨祖晶 于海涛 彭 程 邢 强 黄晓婷 胡景杰 包振民	(153)
暴雨期前后库里泡底栖硅藻群落结构变化及其环境因子相关性	孙世鹏 孔 超 陆欣鑫 范亚文	(162)
兼性厌氧海洋细菌 <i>Shewanella</i> sp. N3B_R 的分离鉴定及产电性能分析研究		
	王再明 王健鑫 苑文凤 李 鹏	(175)
天津近岸海域大型底栖动物摄食功能群特征及其与环境因子的关系		
	徐 飞 王军强 蔡文倩 魏静梅 韩雪萌	(186)
厚壳贻贝(<i>Mytilus coruscus</i>)养殖海域与天然生长海域的微生物群落比较研究		
	李斯远 何治江 吕泓玥 汤秋晗 廖 智 王健鑫 严小军 张晓林	(196)
耐高温球等鞭金藻(<i>Isochrysis galbana</i>)藻种的选育与饵料特性初步分析		
	赵东会 赵丽达 尤 宏 秦 松 王寅初 焦绪栋	(206)
神经肽 FF 在小黄鱼(<i>Larimichthys polyactis</i>)性腺发育早期的表达与定位分析		
	肖 燃 宋长普 朱 阳 黄 伟 郑利兵 迟长凤 楼 宝	(213)
鳊(<i>Siniperca chuatsi</i>)后部侧线系统胚后发育	张瑞祺 赵金良	(222)
基于 RNA-seq 技术的罗氏沼虾(<i>Macrobrachium rosenbergii</i>)不同组织转录组比较分析		
	李喜莲 顾志敏 慎佩晶 徐 洋 张宇飞 高 强 程海华 陈雪峰	(231)
急性 Pb ²⁺ 胁迫对大口黑鲈(<i>Micropterus salmoides</i>)幼鱼 Hippo 信号通路基因表达的影响		
	钱宝英 卢明敏 钱鸿基 潘宇奇 林乐琪 徐芳英 施港归 齐 鑫	(242)
基于计算机视觉的头足类角质颚特征研究 : 形态学参数测量		
	贺芊菡 孙翁杰 刘必林 孔祥洪 林龙山	(252)

第 2 期

前言	陈楠生	王 凡	(261)
印太交汇区海洋生物多样性中心形成演化机制研究进展与展望	徐奎栋		(262)
海洋生物多样性中心形成与演变机制的比较基因组研究进展	陈楠生		(274)
第四纪黑潮源区沉积物的源-汇过程、主要控制因素及其碳循环效应	徐兆凯	张 霁月	常凤鸣 (287)
澳大利亚古季风演化过程、主要控制因素及其海洋生物生产力效应	徐兆凯	孙天淇	常凤鸣 (298)
中国边缘海氮循环过程和源汇格局——以南海为例	杨进宇	汤锦铭	郭香会 高树基 (314)
印太交汇区浮游植物和浮游动物生态学研究进展	孙晓霞	郭术津	刘梦坛 李海波 (323)
上层海洋浮游生物地理分布	张武昌	赵 苑	董 逸 李海波 赵 丽 肖 天 (332)
中国海洋浮游植物和赤潮物种的生物多样性研究进展(一): 渤海	陈楠生		黄海龙 (346)
中国海洋浮游植物和赤潮物种的生物多样性研究进展(二): 东海	陈楠生		陈 阳 (363)
中国海洋浮游植物和赤潮物种的生物多样性研究进展(三): 南海	陈楠生		张梦佳 (385)
中国海洋浮游植物和赤潮物种的生物多样性研究进展(四): 长江口	陈楠生	崔宗梅	徐 青 (402)
海洋植物谱系地理模式与遗传连通性研究进展	胡自民	杜玉群	梁延硕 钟凯乐 张 杰 (418)
海洋动物适应性演化与多样性研究进展	张琳琳	李勇男	翁洁羊 李 杰 王 月 李 倩 (433)
海洋多毛类动物的再生演化	张琳琳	翁洁羊	李 倩 (450)
印度洋-西太平洋海洋动物谱系地理演化格局	何利军	任慧敏	许莎莎 张 经 (468)
印太交汇区海洋软体动物生物多样性研究进展	张均龙	张树乾	焦英毅 (487)
印太交汇区海洋鱼类多样性格局与演化研究进展	刘 静		肖永双 (498)
深海化能生态系统大型生物多样性分布格局及其起源演化研究进展	程 娇	沙忠利	孙邵娥 惠 敏 (508)
深海化能生态系统双壳纲共生体系互作机制研究进展	王敏晓	李超伦	李梦娜 钟兆山 (522)
海洋生物诞生过程、新资源发掘与高值利用	刘建国	刘 洋	王海艳 庞 通 肖永双 杨 娜 (537)

第 3 期

波浪破碎下端流混合的实验研究	牟海迪	刘云龙	袁 媛	鞠 莲	刘 娟	孟 静	陈 旭	(551)
大亚湾海域夏、冬季的潮汐特征及余水位与风的相关性初步探讨	朱 佳	胡建宇	陈照章	孙振宇	杨龙奇	彭帅星	吉皎月	(562)
实验室造波条件对内孤立波发展影响的直接数值模拟	叶潇潇				游景皓	宋金宝		(573)
海底山脊作用下内孤立波破碎研究	林颖典	余俊扬	罗轶野	袁野平				(584)
基于卫星测高与卫星测温的表层流产品生成方法应用评估	刘秀青	张 杰	杨俊钢	曹 蕾				(593)
渤海夏季底层氧亏损分布的年际差异分析	李志成	魏 皓	张海彦	赵化德	郑 楠	宋贵生		(601)
定常风场和吞吐流对乌梁素海流场的影响	王志超	施青松	李 兴	李卫平	杨文焕	于玲红		(614)
基于遥感反演的山东半岛东北部海域悬浮体时空变化规律探讨	刘 焘	朱龙海	胡日军	尹砚军	冷 星			(624)
阿塔卡马海沟深渊和非深渊站位的沉积脂肪酸对比研究	项 羽	王亚松	肖文杰	韩露露	许云平			(635)
阿塔卡马海沟表层水颗粒有机碳与微生物群落呼吸作用的时空变化研究	赵 昕	陈宏威	李文朋	李芯芯				(648)
铁铝复合改性粘土去除藻华生物的效率与机制初探	姜凯钦	俞志明	曹西华	姜文彬	宋秀贤			(657)
不同氮浓度对红色赤潮藻(<i>Akashiwo sanguinea</i>)生长、孢囊形成和生源要素组成的影响	王晓婷	黄 健	刘 云	宋书群	李才文			(665)
条斑紫菜 <i>Tubulin</i> 和 <i>Kinesin</i> 基因家族鉴定及失水胁迫表达模式分析	崔正彩	孔凡娜	茅云翔	孙 斌	王俊皓	董道英		(673)
浙江象山港岛屿春、夏季潮间带大型底栖生物的群落结构特征	刘 颖	李进京	陈 晨	刘 懂	焦海峰	韩庆喜	王一农	尤仲杰 (685)
烟台近岸人工鱼礁与自然岩礁底层渔业生物群落特征对比分析	张荣良	刘 辉	孙东洋	侯朝伟	赵建民			(697)
温度对美洲黑石斑(<i>Centropristis striata</i>)幼鱼生长和免疫因子活力与相关基因表达的影响	李伟业	徐志进	殷小龙	陈 爽	马雪彬	章 霞	邱豪军	张晓林 蒋霞敏 (708)

大口黑鲈(*Micropterus salmoides*)不同养殖模式氮磷收支及养殖效果研究.....刘 梅 原居林 倪 蒙 练青平 郭爱环 (718)

四种不同饵料对真蛸(*Octopus vulgaris*)生长与肠道微生物影响的研究.....骆启豪 王卫军 倪乐海 景福涛 许 贺 李 赞 李 彬 杨建敏 (729)

基于高通量测序技术解析鲢鱼(*Katsuwonus pelamis*)鱼油和鱼白调控肠道菌群结构作用.....李菁菁 张旨轩 王子言 刘 岩 霍春恒 石秋月 陈 菊 韩姣姣 苏秀榕 (738)

基于北斗船位数据的渔业信息解译与应用研究——以中国毛虾限额捕捞管理为例.....李国东 仲霞铭 熊 瑛 龚海翔 汤建华 施金金 吴 磊 (746)

白芍(*Radix paeoniae alba*)提取物对中华绒螯蟹(*Eriocheir sinensis*)造血组织发育及造血因子 Astakine 的影响.....吕孙建 焦锦彪 刘 莉 袁雪梅 于 喆 张海琪 杭小英 施伟达 吴颖蕾 (754)

中国近海豆滨螺属 *Peasiella*(腹足纲, 滨螺科)两物种的分类学研究.....李 晨 亓 鲁 孔令锋 李 琪 (762)

外源 CaCl₂ 调控浒苔(*Ulva prolifera*)高温逆境的比较转录组研究.....唐晓雯 范美华 王超峰 廖 智 李 鹏 徐年军 王健鑫 (766)

龙须菜(*Gracilariopsis lemaneiformis*)海藻糖-6-磷酸合成酶(TPS)对逆境胁迫的响应.....张莹莹 吕 燕 宣雯燕 张小倩 徐年军 孙 雪 (777)

双齿围沙蚕(*Perinereis aibuhitensis*)主要器官的组织学观察及其生理功能研究.....宋静静 刘天红 刘洪军 迟雯丹 刘凯凯 于道德 (786)

《中间型海洋-大气耦合模式及其 ENSO 模拟和预测》出版发行.....(797)

第 4 期

Nrf2 参与水生动物氧化应激调控的研究进展.....严小军 祁鹏志 郭宝英 李继姬 (799)

黑潮近岸分支流在 2017 年 9 月与 2019 年 9 月差异的研究.....燕 杰 侯一筠 刘 泽 (813)

围填海累积效应对钦州湾水动力环境的影响.....吕 赫 张少峰 宋德海 鲍献文 (823)

半遮蔽型海滩剖面长期时空演化过程的经验正交函数分析.....梁伟强 王永红 (834)

内孤立波与平顶海山作用的能量耗散实验研究.....郭钰林 孟 静 徐 昱 贾 村 刘 娟 陈 旭 于宇君 (846)

基于再分析数据的南大洋区域 Ekman 流时空分布规律研究.....林辉义 高艳秋 张继才 (860)

风生近惯性能通量和地形粗糙度对海洋内部混合的影响.....陈 娟 乔梦甜 曹安州 宋金宝 (874)

刚性植被对沿坡运动泥沙异重流动力及湍流特性的影响.....王雨杭 韩东睿 吴挺峰 林颖典 (886)

南极菲尔德斯半岛土壤微生物在富集传代培养中对菲的响应.....李淑君 崔志松 包木太 栾 晓 李颖超 郑 立 (895)

辽河口沉积物中参与主要生物地化循环的微生物功能基因分析.....宋吉雪 明红霞 石婷婷 苏 洁 陈泉睿 金 媛 樊景凤 (904)

改性粘土絮凝后残留的太平洋亚历山大藻(*Alexandrium pacificum*)毒素变化研究.....宋维佳 宋秀贤 李 靖 张 悦 申慧慧 张培培 俞志明 (917)

南极夏季宇航员海浮游动物群落结构及其与环境因子的关系.....牟文秀 杨 光 郝 铭 徐志强 李超伦 (925)

海洋贝类 Toll 样受体及其接头蛋白 MyD88 的分子进化研究.....王 璐 产久林 李 倩 张琳琳 (936)

东海温州水域 4 类常见耐药基因的流行情况研究.....金磊磊 周前进 邵鑫斌 王瑶华 陈 炯 闫茂仓 苗 亮 唐 标 张严峻 (947)

基于神经网络的印度洋长鳍金枪鱼(*Thunnus alalunga*)时空分布与海洋环境关系研究.....程懿麒 张俊波 汪金涛 雷 林 (960)

大菱鲂(*Scophthalmus maximus*)热休克蛋白 SmHsp47 相互作用蛋白 His-pull down 和质谱鉴定.....朱春月 孙志宾 马爱军 刘志峰 杨敬昆 赵亭亭 (971)

澳洲鳗鲡(*Anguilla australis*)不同生长阶段的生物学耐受性特征及其演变趋势.....魏金生 江兴龙 王泽旭 李 凯 (983)

密斑刺鲀(*Diodon hystrix*) *gnrh* 基因的克隆及表达分析.....陈华谱 黄春仁 何睿祺 戴明妹 张明真 李智渊 黄 海 李广丽 (994)

东太平洋赤道海域茎柔鱼(*Dosidicus gigas*)的体型月间变化及环境效应.....连晋欣 臧 娜 林东明 陈新军 (1007)

皱纹盘鲍(*Haliotis discus hannai*)*WNT4* 基因生物信息学分析及与性腺发育相关性的研究 李 旋 冯艳微 袁 波 姜 绪 何金霞 刘相全 (1019)

不同气候条件下南海西沙海域鳶乌贼(*Sthenoteuthis oualaniensis*)渔业生物学比较研究 陆化杰 宁 欣 刘 维 张羽翔 陈子越 陈新军 (1029)

长牡蛎(*Crassostrea gigas*)不同组织中蛋白酶的分布及冷藏过程中酶活力与鲜度变化 章 骞 陈 宏 阙华勇 李钰金 孙乐常 翁 凌 张凌晶 刘光明 曹敏杰 (1039)

栽培羊栖菜(*Sargassum fusiforme*)成熟藻体不同器官的组织结构显微观察及其生理生态学功能剖析 林立东 马增岭 陈斌斌 吴明江 (1047)

变异轴孔珊瑚(*Acropora valida*)对酸化高温胁迫的转录组水平反应及恢复潜力分析 吴 含 肖逸林 柴光俊 宋倩倩 李志勇 (1058)

第 5 期

对海洋生态学和生物海洋学的浅析 李永祺 张鑫鑫 (1067)

马里亚纳海沟万米级水文观测研究 马 克 陈朝晖 李卓然 宋振杰 袁志伟 武 斌 焦 强 王志民 (1075)

北太平洋副热带西部模态水年代际变化特征及其机制分析 代秋亭 刘子洲 刘 聪 翟方国 顾艳镇 李元杰 (1088)

印度洋上层经向翻转环流的冬夏季节对比 刘 雨 徐 康 王卫强 谢 强 王玉国 (1104)

吕宋海峡及周边海域湍流混合的时空分布特征研究 乔梦甜 陈 娟 曹安州 宋金宝 (1115)

台风过境对黄海冷水团及其环流结构的影响 孙 凡 于 非 司广成 王建丰 唐 瑛 (1125)

利用拉格朗日方法探究黑潮近岸分支流在 2019 年春季的起源深度 燕 杰 侯一筠 刘 泽 何源首 胡志顺 (1137)

基于四维变分同化方法的南海中尺度涡后报实验 赵 军 高 山 王 凡 (1145)

基于深度卷积神经网络的海洋牧场岩礁性生物图像分类 孙东洋 刘 辉 张纪红 孙利元 王 清 赵建民 (1160)

微生物复合改性粘土去除东海原甲藻(*Prorocentrum donghaiense*)初探 刘姗姗 俞志明 宋秀贤 曹西华 袁涌铨 (1170)

海洋球石藻(*Emiliania huxleyi*)活性物质分离鉴定及其抗菌抗氧化性能研究 刘静雯 吴书燕 马亚瑞 张恩权 李桂玲 李 健 (1180)

浒苔光照和盐度胁迫响应基因 *UpMYB44* 的克隆与表达分析 何 渊 杨娟娟 沈颂东 (1191)

我国新记录绿潮物种 *Ulva laetevirens* 的比较叶绿体基因组学研究 王 静 王毅超 王洪淑 刘 峰 陈楠生 (1201)

低盐、高温诱导的条斑紫菜(*Pyropia yezoensis*)病烂机制研究 杨佳丽 冯泽中 牛建峰 顾文辉 何帮翔 刘雪华 邵之卓 郑阵兵 王旭雷 王广策 (1214)

基于聚类及简化基因组联合分析的浙江洞头栽培羊栖菜(*Sargassum fusiforme*)品系筛选研究 林立东 吴明江 (1224)

许氏平鲉(*Sebastes schlegelii*)卵子发生及妊娠过程中雌激素、芳香化酶及其受体的变化规律 徐小杰 王学颖 周 莉 刘 清 华李军 (1236)

微管蛋白 β -Tubulin 在二、三倍体虹鳟(*Oncorhynchus mykiss*)表达与定位分析 黄天晴 史秀兰 王炳谦 邹作宇 谷 伟 刘恩慧 程 琳 刘 洋 董福霖 潘赞宇 徐革锋 (1244)

基于三代测序技术的凡纳滨对虾(*Litopenaeus vannamei*)高通量候选基因关联分析方法的建立 李碧瀚 于 洋 刘桂嘉 罗 正 李富花 (1255)

缢蛏(*Sinonovacula constricta*)心率 Arrhenius 拐点温度(ABT)及其与生长性状相关和通径分析 胡凌威 孙长森 董迎辉 林志华 (1265)

栉孔扇贝 *Smad* 基因家族的表达特征和对鳃弧菌侵染的免疫应答分析 董 正 曾启繁 刘亮洁 王 师 (1273)

基于两种机器学习方法分析东海北部海域三疣梭子蟹(*Portunus trituberculatus*)时空分布 栗小东 王 晶 杨春蕙 王迎宾 (1284)

南海西沙群岛海域鳶乌贼(*Sthenoteuthis oualaniensis*)角质颚微结构及生长特性研究 陈子越 武孝慈 陆化杰 刘 凯 任 品 宁 欣 陈新军 (1293)

东太平洋赤道海域鳐乌贼(*Sthenoteuthis oualaniensis*)和茎柔鱼(*Dosidicus gigas*)的食性比较研究.....李云凯 冯 丹 高小迪 陈新军 贡 艺 (1303)

鳃弧菌(*Vibrio anguillarum*)核酸适配体筛选中高频序列的进化多样性研究.....许 净 刘慧敏 林筱钧 郑 江 江兴龙 鄢庆彬 范云庭 汤学敏 (1315)

中华蛸寄生丛集球虫(顶复亚门:丛集球虫科)新种的形态学与分子生物学研究.....任 静 何卫彤 王丽华 唐 艳 郑小东 (1323)

第 6 期

我国海底热液活动研究的阶段性进展与展望.....曾志刚 (1333)

EnKF 集合同化下黄海海雾数值确定性预报初始场构造方法的探究.....郑 青 高山红 (1350)

基于 HYCOM 再分析数据的浙江近海对台风“灿鸿”(2015)的响应研究.....潘云鹤 陆诗铭 曹安州 范鲁腾 李培良 刘兴传 (1365)

基于大涡模拟与被动示踪物模型的人工鱼礁数值研究.....王者也 李 爽 (1376)

基于计算机断层扫描技术重构三维生物扰动构造——以长江口现代沉积为例.....米 智 范德江 刘晓航 郑世雯 程 鹏 张 鑫 (1388)

超富营养城市湖泊原位生态修复效果分析——以武汉南湖为例.....张 苗 李明梦 刘 律 李忠超 苗 滕 余业鑫 赵永晶 李 艳 王海军 王洪铸 (1399)

黄茅海浮游生物及其粒径结构的潮汐变化特征研究.....刘子嘉 李 芊 陈寅超 帅义萍 马梦真 (1408)

长牡蛎(*Crassostrea gigas*)黑色壳表面微生物多样性的研究.....李玲玲 谢超伊 宋宏策 陈 熙 刘文娟 黄宝玉 张美淑 刘雅琼 魏 磊 王晓通 (1418)

黑鲷(*Acanthopagrus schlegelii*)对海月水母(*Aurelia coerulea*)的摄食研究.....李冬辰 张 芳 (1430)

大亚湾西南海域尖笔帽螺 2020 年 7 月暴发期内的分布特征.....刘 岱 应轲臻 蔡中华 黄洪辉 毕洪生 (1438)

环境因子对浙江沿岸春季日本鲈(*Scomber japonicus*)幼鱼生长、分布的影响.....朱文斌 崔国辰 胡翠林 朱海晨 王雅丽 蒋日进 张亚洲 冯春雷 (1448)

香鱼(*Plecoglossus altivelis*)CC 型趋化因子受体 3(CCR3)基因的分子鉴定及其对鳃弧菌感染响应的研究.....张玲玲 余 莉 李长红 苗 亮 陈 炯 (1456)

白消安及其与高温联合处理对黄姑鱼(*Nibea albiflora*)性腺发育的影响.....杨 磊 胡伟华 俞燕洁 陈睿毅 徐冬冬 (1465)

金钱鱼(*Scatophagus argus*)体色发育及黑斑的形成过程.....林晓展 张俊鹏 黄 洋 石红娟 李广丽 田昌绪 (1474)

黄颡鱼(*Pelteobagrus fulvidraco*)成体造血器官头肾和体肾转录组比较研究.....钟爱华 代小新 (1486)

菲律宾蛤仔(*Ruditapes philippinarum*)“斑马蛤 2 号”筏式和底播养殖模式比较研究.....田 园 金 燕 陈 炜 李翠翠 王 璠 于 欣 车宗豪 刘 括 梁 腾 霍忠明 闫喜武 (1496)

哈维氏弧菌浸泡感染下泥蚶(*Tegillarca granosa*)不同组织弧菌载量的变化规律分析.....杨千元 滕爽爽 蔡逸龙 肖国强 蔡西栗 (1506)

笠贝(*Lottia goshimai*)早期发育过程的扫描电镜观察.....崔梦露 郇 聘 刘保忠 (1514)

海南岛近海砗磲(*Tridacninae*)资源时空变化——以蜈支洲岛为例.....李 萌 李秀保 顾志峰 夏景全 王爱民 刘春胜 (1521)

曼氏无针乌贼(*Sepiella japonica*)促性腺激素释放激素(GnRH)基因的鉴定、特征及成熟期的表达研究.....吴俊虹 曹子豪 郑利兵 迟长凤 (1530)

基于耳石微化学的南海北部海域两种枪乌贼洄游路线初步研究.....金 岳 李 楠 俞 骏 方 舟 陈新军 (1540)

曼氏无针乌贼(*Sepiella japonica*)繁殖期行为谱特征的研究.....陈佳怡 龙进霞 徐汉祥 张 涛 史会来 徐开达 梁 君 (1549)

三亚蜈支洲岛热带海洋牧场渔业资源现状及季节变动.....王新元 李建龙 章 翔 陈孟玲 吴沛霖 马文刚 彭思颖 张 玺 谢建军 高 菲 许 强 王爱民 (1557)

Piwi 基因参与两性卤虫(*Artemia franciscana*)的生殖调控研究.....任翊卓 韩学凯 左佳俊 欧阳雪梅 段 虎 隋丽英 (1567)

OCEANOLOGIA ET LIMNOLOGIA SINICA

(Haiyang Yu Huzhao)

Vol.52 2021

CONTENTS

No.1

Research Progress on Species Diversity and Distribution of the Genus <i>Phaeocystis</i>	
..... SHEN Ping-Ping, QI Yu-Zao	(15)
Relationship between the Subtropical South/North Pacific Meridional Modes and ENSO	
..... LU Yun-Long, FENG Jun-Qiao, JIA Fan, WANG Qing-Ye	(26)
Comparative Study on the Application of Different Turbulence Estimation Methods in Luzon Strait	
..... CHEN Zi-Fei, YU Fei, WANG Jian-Feng, NAN Feng, REN Qiang, SUN Fan	(38)
Numerical Simulation and Forecasting of Drift, Growth, and Death of <i>Enteromorpha</i> in the Yellow Sea	
..... HE En-Ye, JI Xuan-Liang, GAO Shan, ZHAO Liang, WANG Yu-Heng, LI Yun, YANG Jing	(50)
Characteristics of Wave Field in the Yellow Sea and the Bohai Sea Under the Influence of Two Typical Typhoons	
..... LI Zhao, HOU Yi-Jun, LI Shui-Qing, LI Jian	(65)
Characteristics of Tropical Cyclones that Cause Disastrous Waves in Shanwei City	
..... YIN Yu-Qi, HOU Yi-Jun, FENG Xing-Ru, RONG Zeng-Rui	(74)
Spatial and Temporal Distribution of Wave Energy on Low Energy Coasts Under the Effect of Beach Restoration Project	
..... WEN Chang-Qi, ZHU Jun, CAI Feng, WANG Li-Hui, QI Hong-Shuai, LIU Jian-Hui, LEI Gang, ZHAO Shao-Hua	(85)
Duct Characteristics over the China Seas Based on ECMWF Reanalysis Data	
..... CHENG Yin-He, YANG Xin-Kun, ZHANG Yu-Sheng, YOU Zhi-Wei	(96)
Source and Distribution of Organic Matters in Tidal Flat of Xiangshan Bay	
..... XU Hao, FENG Bai-Xiang, LI Jia-Lin, HE Gai-Li	(105)
Coagulation of DPQAC-PAC Composite Modified Clay in Different Media	
..... WU Ting, CAO Xi-Hua, YU Zhi-Ming, SONG Xiu-Xian, JIANG Wen-Bin, YUAN Yong-Quan, WU Zai-Xing, HE Li-Yan, FAN Zi-Chu	(113)
Correlation Analysis of Environmental Factors and Biological Characteristics of <i>Ulva Prolifera</i> during Green Tides Drifting	
..... GUAN Chen, HAO Ya, HOU Cheng-Zong, TANG Xue-Xi, WANG Ying	(122)
Structural Change of Green Macroalgal Community Attached on Rafts in Subei Shoal and Its Correlation with Environmental Factors	
..... HAO Ya, GUAN Chen, HOU Cheng-Zong, TANG Xue-Xi, WANG Ying	(131)
Food Composition of Common Jellyfish Species in Hongyanhe Area Revealed by Fatty Acid Biomarkers and Stable Carbon and Nitrogen Isotopes	
..... WANG Jun-Jian, WANG Nan, WANG Yan-Tao, WANG Xiao-Cheng, LI Chao-Lun	(143)
Pollution of Lipophilic Shellfish Toxins in Qinzhou Bay: Seawater and <i>Crassostrea Hongkongensis</i>	
..... XU Yi-Xiao, WEI Guang-Ling, WANG Yu, JIA Ying, GAO Han, ZHANG Teng, TONG Meng-Meng	(152)
Identification and Expression Profiling of the <i>PPAR</i> Gene in <i>Chlamys Farreri</i>	
..... SUI Ming-Yi, YANG Zu-Jing, YU Hai-Tao, PENG Cheng, XING Qiang, HUANG Xiao-Ting, HU Jing-Jie, BAO Zhen-Min	(161)
Changes in Community Structure of Benthic Diatom and the Environmental Factors Before and After Rainstorm Season in the Kulipao Lake	
..... SUN Shi-Peng, KONG Chao, LU Xin-Xin, FAN Ya-Wen	(174)
Isolation and Identification of Facultative Anaerobic Marine Bacterium <i>Shewanella</i> sp. N3B_R and Analysis of Its Electrical Performance in a Two-compartment Microbial Fuel Cell	
..... WANG Zai-Ming, WANG Jian-Xin, YUAN Wen-Feng, LI Peng	(185)

Macrozoobenthos Functional Feeding Groups and Its Relationship with Environmental Factors in the Tianjin Coastal Area	XU Fei, WANG Jun-Qiang, CAI Wen-Qian, WEI Jing-Mei, HAN Xue-Meng	(195)
Comparative Study on Microbial Community in Mussel <i>Mytilus coruscus</i> Body and Seawater of Its Natural and Cultural Sea Area in Zhoushan, Zhejiang	LI Si-Yuan, HE Zhi-Jiang, LYU Hong-Yue, TANG Qiu-Han, LIAO Zhi, WANG Jian-Xin, YAN Xiao-Jun, ZHANG Xiao-Lin	(205)
Breeding and Feeding Characteristics of High-temperature-resistant Strains of <i>Isochrysis galbana</i>	ZHAO Dong-Hui, ZHAO Li-Da, YOU Hong, QIN Song, WANG Yin-Chu, JIAO Xu-Dong	(212)
Expression and Localization of the Neuropeptide FF Gene from <i>Larimichthys polyactis</i> During Primitive Gonadal Period	XIAO Ran, SONG Chang-Pu, ZHU Yang, HUANG Wei, ZHENG Li-Bing, CHI Chang-Feng, LOU Bao	(221)
Postembryonic Development of the Posterior Lateral Line System of Mandarinfish <i>Siniperca chuatsi</i>	ZHANG Rui-Qi, ZHAO Jin-Liang	(230)
Comparative Transcriptome Analysis of Different Tissues in Giant Freshwater Prawns (<i>Macrobrachium rosenbergii</i>) Based on RNA-seq	LI Xi-Lian, GU Zhi-Min, SHEN Pei-Jing, XU Yang, ZHANG Yu-Fei, GAO Qiang, CHENG Hai-Hua, CHEN Xue-Feng	(241)
Effect of Acute Pb ²⁺ Stress on the Expression of Genes Involved in Hippo Signaling Pathway in Juvenile Largemouth Bass <i>Micropterus salmoides</i>	QIAN Bao-Ying, LU Ming-Min, QIAN Hong-Ji, PAN Yu-Qi, LIN Le-Qi, XU Fang-Ying, SHI Gang-Gui, QI Xin	(251)
Morphological Study of Cephalopod Beak Based on Computer Vision : Morphological Parameter Measurement	HE Qian-Han, SUN Weng-Jie, LIU Bi-Lin, KONG Xiang-Hong, LIN Long-Shan	(259)

No.2

Foreword	CHEN Nan-Sheng, WANG Fan	(261)
Formation and Evolution Mechanisms of Marine Biodiversity Center in the Indo-Pacific Convergence Region: Progress and Prospects	XU Kui-Dong	(273)
Advances in Comparative Genomics Analysis of Mechanisms Underlying the Formation and Evolution of Marine Biodiversity	CHEN Nan-Sheng	(286)
Sedimentary Source-Sink Processes, Dominant Controlling Factors, and Their Carbon Cycle in the Kuroshio Source Region in the Quaternary	XU Zhao-Kai, ZHANG Qian-Yue, CHANG Feng-Ming	(297)
Evolution of Australian Paleomonsoon and Its Controlling Factors and Effect on Marine Productivity	XU Zhao-Kai, SUN Tian-Qi, CHANG Feng-Ming	(313)
Nitrogen Cycling Processes and Its Budget in China Marginal Sea: Case Studies in the South China Sea	YANG Jin-Yu, TANG Jin-Ming, GUO Xiang-Hui, KAO Shuh-Ji	(322)
Research Progress on Phytoplankton and Zooplankton Ecology in Indo-Pacific Convergence Region	SUN Xiao-Xia, GUO Shu-Jin, LIU Meng-Tan, LI Hai-Bo	(331)
Biogeography of Epipelagic Marine Plankton	ZHANG Wu-Chang, ZHAO Yuan, DONG Yi, LI Hai-Bo, ZHAO Li, XIAO Tian	(345)
Advances in the Study of Biodiversity of Phytoplankton and Red Tide Species in China (I): The Bohai Sea	CHEN Nan-Sheng, HUANG Hai-Long	(362)
Advances in the Study of Biodiversity of Phytoplankton and Red Tide Species in China (II): The East China Sea	CHEN Nan-Sheng, CHEN Yang	(384)
Advances in the Study of Biodiversity of Phytoplankton and Red Tide Species in China (): The South China Sea	CHEN Nan-Sheng, ZHANG Meng-Jia	(401)
Advances in the Study of Biodiversity of Phytoplankton and Red Tide Species in China (): The Changjiang Estuary	CHEN Nan-Sheng, CUI Zong-Mei, XU Qing	(417)

Phylogeographic Patterns and Genetic Connectivity of Marine Plants: a Review	
..... HU Zi-Min, DU Yu-Qun, LIANG Yan-Shuo, ZHONG Kai-Le, ZHANG Jie	(429)
Review on Adaptive Evolution and Biodiversity of Marine Animals	
..... ZHANG Lin-Lin, LI Yong-Nan, WENG Jie-Yang, LI Jie, WANG Yue, LI Qian	(449)
The Evolution of Regeneration in Marine Polychaete	
..... ZHANG Lin-Lin, WENG Jie-Yang, LI Qian	(467)
Phylogeographic Pattern of Marine Fauna in the Indo-West Pacific	
..... HE Li-Jun, REN Hui-Min, XU Sha-Sha, ZHANG Jing	(486)
Progress on Marine Molluscan Biodiversity in the Indo-Pacific Convergence Region	
..... ZHANG Jun-Long, ZHANG Shu-Qian, JIAO Ying-Yi	(497)
Progress in Fish Diversity Pattern and Evolution in the Indo-Pacific Convergence Region	
..... LIU Jing, XIAO Yong-Shuang	(507)
Progress on the Origin, Evolution and Biogeographic Pattern of Megafauna Biodiversity in Deep-Sea Chemosynthetic Ecosystems	
..... CHENG Jiao, SHA Zhong-Li, SUN Shao-E, HUI Min	(521)
Research Progress on the Interaction Mechanism of Bivalve Symbiosis System in Deep-Sea Chemosynthetic Ecosystem	
..... WANG Min-Xiao, LI Chao-Lun, LI Meng-Na, ZHONG Zhao-Shan	(536)
The Origin and Evolution of Marine Life, the Discovery and High-value Utilization of New Resources	
..... LIU Jian-Guo, LIU Yang, WANG Hai-Yan, PANG Tong, XIAO Yong-Shuang, YANG Na	(550)

No.3

Turbulent Mixing during Wave Breaking: an Experimental Study	
..... MU Hai-Di, LIU Yun-Long, YUAN Yuan, JU Lian, LIU Juan, MENG Jing, CHEN Xu	(561)
A Preliminary Study on the Tidal Characteristics in Summer and Winter and the Correlation between Residual Water Level and Wind in Daya Bay	
..... ZHU Jia, HU Jian-Yu, CHEN Zhao-Zhang, SUN Zhen-Yu, YANG Long-Qi, PENG Shuai-Xing, JI Jiao-Yue	(572)
Direct Numerical Simulation of the Effect of Laboratory Wave-Making Conditions on the Development Internal Solitary Waves	
..... YE Xiao-Xiao, YOU Jing-Hao, SONG Jin-Bao	(583)
Experimental Study on Internal Solitary Wave Breaking under Submarine Ridge	
..... LIN Ying-Dian, YU Jun-Yang, LUO Yuan-Ye, YUAN Ye-Ping	(592)
Application Evaluation of Surface Currents Product Generation Method Based on Satellite Altimetry and Satellite Temperature Measurement	
..... LIU Xiu-Qing, ZHANG Jie, YANG Jun-Gang, CAO Lei	(600)
The Interannual Difference in Summer Bottom Oxygen Deficiency in Bohai Sea	
..... LI Zhi-Cheng, WEI Hao, ZHANG Hai-Yan, ZHAO Hua-De, ZHENG Nan, SONG Gui-Sheng	(613)
The Influences of Uniform Wind and Throughput Flow on the Flow Field of Wuliangsu Lake	
..... WANG Zhi-Chao, SHI Qing-Song, LI Xing, LI Wei-Ping, YANG Wen-Huan, YU Ling-Hong	(623)
The Temporal and Spatial Variation of Suspended Matter in the Northeast Shandong Peninsula Based on Remote Sensing Inversion	
..... LIU Tao, ZHU Long-Hai, HU Ri-Jun, YIN Yan-Jun, LENG Xing	(634)
Comparison of Fatty Acids in Sediments from Hadal and Non-Hadal Sites of the Atacama Trench	
..... XIANG Yu, WANG Ya-Song, XIAO Wen-Jie, HAN Lu-Lu, XU Yun-Ping	(647)
Temporal and Spatial Distribution of Particulate Organic Carbon and Microbial Community Respiration of Atacama Trench Surface Water, Chile	
..... ZHAO Xin, CHEN Hong-Wei, LI Wen-Peng, LI Xin-Xin	(656)
Removal Efficiency and Mechanism of Algal Bloom Organisms Using Poly-Al-Fe Composite Modified Clay	
..... JIANG Kai-Qin, YU Zhi-Ming, CAO Xi-Hua, JIANG Wen-Bin, SONG Xiu-Xian	(664)
Effects of Nitrogen Nutrition on the Growth, Encystment and Biogenic Elements Composition of <i>Akashiwo sanguinea</i>	
..... WANG Xiao-Ting, HUANG Jian, LIU Yun, SONG Shu-Qun, LI Cai-Wen	(672)
Identification and Expression Pattern Analysis of <i>Tubulin</i> and <i>Kinesin</i> Gene Family in <i>Pyropia yezoensis</i>	

Dehydration Stresses	
.....CUI Zheng-Cai, KONG Fan-Na, MAO Yun-Xiang, SUN Bin, WANG Jun-Hao, DONG Dao-Ying (684)	
Characteristics of the Intertidal Macrobenthic Community Structure from Nine Islands in Xiangshan Bay, Zhejiang Province, in Spring and Summer	LIU Ying, LI Jin-Jing, CHEN Chen, LIU Dong, JIAO Hai-Feng, HAN Qing-Xi, WANG Yi-Nong, YOU Zhong-Jie (696)
Characteristics of Benthic Fishery Community at Natural Reefs and Artificial Reefs Located in Yantai Offshore Area	ZHANG Rong-Liang, LIU Hui, SUN Dong-Yang, HOU Chao-Wei, ZHAO Jian-Min (707)
Effects of Temperature on Growth, Immune Factor Activity and Related Gene Expression of Juvenile <i>Centropristis striata</i>	LI Wei-Ye, XU Zhi-Jin, YI Xiao-Long, CHEN Shuang, MA Xue-Bin, ZHANG Xia, QIU Hao-Jun, ZHANG Xiao-Lin, JIANG Xia-Min (717)
A Comparative Study on Nitrogen and Phosphorus Budget and Aquaculture Effect of <i>Micropterus salmoides</i> in Two Modes	LIU Mei, YUAN Ju-Lin, NI Meng, LIAN Qing-Ping, GUO Ai-Huan (728)
Effects of Four Different Diets on Growth and Intestinal Microorganisms of Common Octopus (<i>Octopus vulgaris</i>)	LUO Qi-Hao, WANG Wei-Jun, NI Le-Hai, JING Fu-Tao, XU He, LI Zan, LI Bin, YANG Jian-Min (737)
Regulation Effect of Tuna (<i>Katsuwonus Pelamis</i>) Fish Oil and Fish Sperm on Gut Microbiota Structure	LI Jing-Jing, ZHANG Zhi-Xuan, WANG Zi-Yan, LIU Yan, HUO Chun-Heng, SHI Qiu-Yue, CHEN Ju, HAN Jiao-Jiao, SU Xiu-Rong (745)
Interpretation and Application of Fishery Information Based on Beidou Position Data: a Case Study of TACs Pilot Project of <i>Acetes chinensis</i>	LI Guo-Dong, ZHONG Xia-Ming, XIONG Ying, GONG Hai-Xiang, TANG Jian-Hua, SHI Jin-Jin, WU Lei (753)
Effects of <i>Radix paeoniae alba</i> Extraction on Hematopoietic Tissue and Hematopoietic Factor Astakine in <i>Eriocheir sinensis</i>	LYU Sun-Jian, JIAO Jin-Biao, LIU Li, YUAN Xue-Mei, YU Zhe, ZHANG Hai-Qi, HANG Xiao-Ying, SHI Wei-Da, WU Ying-Lei (761)
Taxonomy of Two Species of <i>Peasiella</i> (Gastropoda, Littorinidae) from China Seas	LI Chen, QI Lu, KONG Ling-Feng, LI Qi (765)
Comparative Transcriptome Study of <i>Ulva prolifera</i> to Calcium Chloride Treatment Under High Temperature Stress	TANG Xiao-Wen, FAN Mei-Hua, WANG Chao-Feng, LIAO Zhi, LI Peng, XU Nian-Jun, WANG Jian-Xin (776)
Response of Trehalose-6-Phosphate Synthase (TPS) to Abiotic Stress in <i>Gracilariopsis lemaneiformis</i>	ZHANG Ying-Ying, LYU Yan, XUAN Wen-Yan, ZHANG Xiao-Qian, XU Nian-Jun, SUN Xue (785)
Histological Observation on Physiologic Function of <i>Perinereis aibuhitensis</i>	SONG Jing-Jing, LIU Tian-Hong, LIU Hong-Jun, CHI Wen-Dan, LIU Kai-Kai, YU Dao-De (796)

No.4

The Advances in Research of Nrf2 Pathway Involved in Oxidative Stress Regulation in Aquatic Animals	YAN Xiao-Jun, QI Peng-Zhi, GUO Bao-Ying, LI Ji-Ji (812)
The Difference of the Nearshore Kuroshio Branch Current Between September 2017 and September 2019	YAN Jie, HOU Yi-Jun, LIU Ze (822)
The Cumulative Effect of Land Reclamation on Hydrodynamics in Qinzhou Bay	LYU He, ZHANG Shao-Feng, SONG De-Hai, BAO Xian-Wen (833)
Empirical Orthogonal Function Analysis of the Long-Term Spatiotemporal Evolution of A Semi-Sheltered Beach	LIANG Wei-Qiang, WANG Yong-Hong (845)
Laboratory Study on Energy Dissipation of Internal Solitary Waves in Guyots	GUO Yu-Lin, MENG Jing, XU Yu, JIA Cun, LIU Juan, CHEN Xu, YU Yu-Jun (859)
The Spatial and Temporal Distribution of Ekman Current in the Southern Ocean Based on Reanalysis Data	

.....	LIN Hui-Yi , GAO Yan-Qiu , ZHANG Ji-Cai	(873)
Influence of Wind-Induced Near-Inertial Energy Flux and Topographic Roughness on Ocean Internal Mixing		
.....	CHEN Juan, QIAO Meng-Tian, CAO An-Zhou, SONG Jin-Bao	(885)
Effect of Rigid Vegetation on Dynamics and Turbulence of Sediment Gravity Flow Downslope.....		
.....	WANG Yu-Hang, HAN Dong-Rui, WU Ting-Feng, LIN Ying-Dian	(894)
Responses of Soil Microorganisms to Phenanthrene in Enrichment Cultures and Subcultures from Fildes Peninsula, Antarctica.....	LI Shu-Jun, CUI Zhi-Song, BAO Mu-Tai, LUAN Xiao, LI Ying-Chao, ZHENG Li	(903)
Analysis of Microbial Functional Genes Involved in Major Biogeochemical Cycles in Sediments of Liaohe River Estuary		
.....	SONG Ji-Xue, MING Hong-Xia, SHI Ting-Ting, SU Jie, CHEN Quan-Rui, JIN Yuan, FAN Jing-Feng	(916)
Toxin Remained in Residual <i>Alexandrium Pacificum</i> after Flocculation with Modified Clay.....	SONG Wei-Jia,	
	SONG Xiu-Xian, LI Jing, ZHANG Yue, SHEN Hui-Hui, ZHANG Pei-Pei, YU Zhi-Ming	(924)
The Zooplankton Community in Cosmonaut Sea: Community Structure and Environmental Factors		
.....	MOU Wen-Xiu, YANG Guang, HAO Qiang, XU Zhi-Qiang, LI Chao-Lun	(935)
Evolutionary History of the Toll-Like Receptor and MyD88 in Molluscs.....		
.....	WANG Lu, CHAN Jiu-Lin, LI Qian, ZHANG Lin-Lin	(946)
Investigation on Resistance Genes Against Four Types of Common Antibiotics in Wenzhou Waters of the East China Sea	JIN Jing-Lei, ZHOU Qian-Jin, SHAO Xin-Bin,	
	WANG Yao-Hua, CHEN Jiong, YAN Mao-Cang, MIAO Liang, TANG Biao, ZHANG Yan-Jun	(959)
Study on the Relationship Between Temporal-spatial Distribution of Indian Ocean Albacore (<i>Thunnus alalunga</i>) and Marine Environment Based on Neural Network		
.....	CHENG Yi-Qi, ZHANG Jun-Bo, WANG Jin-Tao, LEI Lin	(970)
Identification of Proteins Interaction with <i>Scophthalmus maximus</i> Heat Shock Protein <i>SmHsp47</i> by His-pull down Combined with Mass Spectrometry		
.....	ZHU Chun-Yue, SUN Zhi-Bin, MA Ai-Jun, LIU Zhi-Feng, YANG Jing-Kun, ZHAO Ting-Ting	(982)
Biological Tolerance Characteristics and Evolution Trend of <i>Anguilla australis</i> at Different Growth Stages		
.....	WEI Jin-Sheng, JIANG Xing-Long, WANG Ze-Xu, LI Kai	(993)
Cloning and Expression of <i>gnrh</i> Gene in <i>Diodon hystris</i>	CHEN Hua-Pu, HUANG Chun-Ren,	
.....	HE Rui-Qi, DAI Ming-Shu, ZHANG Ming-Zhen, LI Zhi-Yuan, HUANG Hai, LI Guang-Li	(1006)
Monthly Variation in Body Size of <i>Dosidicus gigas</i> and Environmental Responses in the Equatorial Waters of Eastern Pacific Ocean	LIAN Jin-Xin, ZANG Na, LIN Dong-Ming, CHEN Xin-Jun	(1018)
Bioinformatics Analysis of <i>WNT4</i> Gene of <i>Halotis discus hannai</i> and Its Correlation to Gonadal Development		
.....	LI Xuan, FENG Yan-Wei, YUAN Bo, JIANG Xu, HE Jin-Xia, LIU Xiang-Quan	(1028)
Comparison in Fishery Biology of <i>Sthenoteuthis oualaniensis</i> in Different Climate Events in the South China Sea		
.....	LU Hua-Jie, NING Xin, LIU Wei, ZHANG Yu-Xiang, CHEN Zi-Yue, CHEN Xin-Jun	(1038)
Distribution of Proteases in Different Tissues of <i>Crassostrea gigas</i> and Changes of Enzyme Activity and Freshness During Cold Storage	ZHANG Qian, CHEN Hong, QUE Hua-Yong,	
.....	LI Yu-Jin, SUN Le-Chang, WENG Ling, ZHANG Ling-Jing, LIU Guang-Ming, CAO Min-Jie	(1046)
Analysis of Physiological and Ecological Functions to Mature Sporophyte of Cultivation <i>Sargassum fusiforme</i> Based on Its Organ Morphological Structure.....		
.....	LIN Li-Dong, MA Zeng-Ling, CHEN Bin-Bin, WU Ming-Jiang	(1057)
Transcriptomic Response and the Recovery Potential of <i>Acropora valida</i> to Acidic-thermal Stress		
.....	WU Han, XIAO Yi-Lin, CHAI Guang-Jun, SONG Qian-Qian, LI Zhi-Yong	(1066)

No.5

Cognition on Marine Ecology and Biological Oceanography.....	LI Yong-Qi, ZHANG Xin-Xin	(1074)
--	---------------------------	--------

Study on 10 000-m Hydrological Observations in the Mariana Trench.....	MA Ke, CHEN Zhao-Hui, LI Zhuo-Ran, SONG Zhen-Jie, YUAN Zhi-Wei, WU Bin, JIAO Qiang, WANG Zhi-Min (1087)
Decadal Variation of Subtropical Mode Water in the North Pacific Ocean and Its Mechanism	DAI Qiu-Ting, LIU Zi-Zhou, LIU Cong, ZHAI Fang-Guo, GU Yan-Zhen, LI Yuan-Jie (1103)
Difference of the Shallow Meridional Overturning Circulation in the Indian Ocean Between Winter and Summer	LIU Yu, XU Kang, WANG Wei-Qiang, XIE Qiang, WANG Yu-Guo (1114)
Spatial and Temporal Distribution of Turbulent Mixing in the Luzon Strait and Nearby Sea	QIAO Meng-Tian, CHEN Juan, CAO An-Zhou, SONG Jin-Bao (1124)
Influence of Typhoon on Temperature and Current Structure of the Yellow Sea	SUN Fan, YU Fei, SI Guang-Cheng, WANG Jian-Feng, TANG Ying (1136)
The Origination Depth of the Nearshore Kuroshio Branch Current in the Spring of 2019 Based on the Lagrangian Method.....	YAN Jie, HOU Yi-Jun, LIU Ze, HE Yuan-Shou, HU Zhi-Shun (1144)
The Mesoscale Eddy Hindcast Experiment for the South China Sea Based on 4D-Var Method.....	ZHAO Jun, GAO Shan, WANG Fan (1159)
Classification of Reef Biological Images of Marine Ranch Based on Deep Convolution Neural Network	SUN Dong-Yang, LIU Hui, ZHANG Ji-Hong, SUN Li-Yuan, WANG Qing, ZHAO Jian-Min (1169)
Research on Mitigation of <i>Prorocentrum donghaiense</i> by Micro-Modified Clay	LIU Shan-Shan, YU Zhi-Ming, SONG Xiu-Xian, CAO Xi-Hua, YUAN Yong-Quan (1179)
Isolation and Antimicrobial and Antioxidant Properties of Bio-Active Compounds from Marine Coccolithophores <i>Emilliania huxleyi</i>	LIU Jing-Wen, WU Shu-Yan, MA Ya-Rui, ZHANG En-Quan, LI Gui-Ling, LI Jian (1187)
Cloning and Expression of the <i>UpMYB44</i> Gene in Response to Light and Salinity Stress in <i>Ulva Prolifera</i>	HE Yuan, YANG Juan-Juan, SHEN Song-Dong (1200)
Comparative Chloroplast Genome Analysis of New-Green Tide Causative Species in China: <i>Ulva laetevirens</i>	WANG Jing, WANG Yi-Chao, WANG Hong-Shu, LIU Feng, CHEN Nan-Sheng (1213)
Preliminary Study on the Mechanism of Rotten Diseases Induced by Low Salinity and High Temperature in <i>Pyropia yezoensis</i>	YANG Jia-Li, FENG Ze-Zhong, NIU Jian-Feng, GU Wen-Hui, HE Bang-Xiang, LIU Xue-Hua, SHAO Zhi-Zhuo, ZHENG Zhen-Bing, WANG Xu-Lei, WANG Guang-Ce (1223)
The Diversity of Cultivated <i>Sargassum fusiforme</i> Strains in Dongtou, Zhejiang Province by the Combination of Air-bladder Phenotype and Simplified Genome.....	LIN Li-Dong, WU Ming-Jiang (1235)
Changes of Estrogen, Aromatase and Estrogen Receptor During Oogenesis and Gestation of <i>Sebastes schlegelii</i>	XU Xiao-Jie, WANG Xue-Ying, ZHOU Li, LIU Qing-Hua, LI Jun (1243)
Analysis the Expression and Localization of β -Tubulin in Diploid and Triploid Rainbow Trout (<i>Oncorhynchus mykiss</i>)	HUANG Tian-Qing, SHI Xiu-Lan, WANG Bing-Qian, ZOU Zuo-Yu, GU Wei, LIU En-Hui, CHENG Lin, LIU Yang, DONG Fu-Lin, PAN Zan-Yu, XU Ge-Feng (1254)
A High-throughput Method for Candidate Gene Association Analysis in <i>Litopenaeus vannamei</i> Based on the Third-generation Sequencing Technology.....	LI Bi-Han, YU Yang, LIU Gui-Jia, LUO Zheng, LI Fu-Hua (1264)
Correlation and Regression Analysis Between the Arrhenius Break Temperatures (ABT) of Heart Rate and Growth Traits of <i>Sinonovacula constricta</i>	HU Ling-Wei, SUN Chang-Sen, DONG Ying-Hui, LIN Zhi-Hua (1272)
Expression Characteristics of <i>Smad</i> Gene Family and Its Immune Response to <i>Vibrio anguillarum</i> Infection in <i>Chlamys farreri</i>	DONG Zheng, ZENG Qi-Fan, LIU Liang-Jie, WANG Shi (1283)
Spatiotemporal Distribution of <i>Portunus trituberculatus</i> in the Northern East China Sea Based on Two Machine Learning Methods	LI Xiao-Dong, WANG Jing, YANG Chun-Hui, WANG Ying-Bin (1292)
Beak Microstructure and Growth Characteristics of <i>Sthenoteuthis oualaniensis</i> in the Xisha Islands Waters of the South China Sea.....	CHEN Zi-Yue, WU Xiao-Ci, LU Hua-Jie, LIU Kai, REN Pin, NING Xin, CHEN Xin-Jun (1302)
Comparative Study on the Feeding Habits of <i>Sthenoteuthis oualaniensis</i> and <i>Dosidicus gigas</i> in the Eastern Equatorial	

Pacific Ocean	LI Yun-Kai, FENG Dan, GAO Xiao-Di, CHEN Xin-Jun, GONG Yi (1314)
Study on Evolutionary Diversity of Sequences with High Frequency During Selection of Aptamers Against <i>Vibrio anguillarum</i>	XU Jing, LIU Hui-Min, LIN Xiao-Jun, ZHENG Jiang, JIANG Xing-Long, YAN Qing-Pi, FAN Yun-Ting, TANG Xue-Min (1322)
Morphological and Molecular Characterization of a New Species of <i>Aggregata</i> (Apicomplexa: Aggregatidae) Infecting <i>Octopus sinensis</i>	REN Jing, HE Wei-Tong, WANG Li-Hua, TANG Yan, ZHENG Xiao-Dong (1331)

No.6

Progress and Prospect in China in Research to Submarine Hydrothermal Activities	ZENG Zhi-Gang (1349)
Construction of Initial Field for Numerical Forecast of the Yellow Sea Fog Based on EnKF Data Assimilation	ZHENG Qing, GAO Shan-Hong (1364)
The Response to Typhoon Chan-Hom (2015) off Zhejiang Based On Hycom Result	PAN Yun-He, LU Shi-Ming, CAO An-Zhou, FAN Lu-Teng, LI Pei-Liang, LIU Xing-Chuan (1375)
Numerical Simulation of Cubic Artificial Reef Under Large Eddy in Passive Scalar Model	WANG Zhe-Ye, LI Shuang (1387)
Three-Dimensional Reconstruction of Bioturbation Structure of Modern Sediments in Changjiang River Estuary Using Computer Tomography	MI Zhi, FAN De-Jiang, LIU Xiao-Hang, ZHENG Shi-Wen, CHENG Peng, ZHANG Xin (1398)
Effects of In-Situ Ecological Restoration in Nanhu Lake, A Hypertrophic Urban Lake, China	ZHANG Miao, LI Ming-Meng, LIU Lyu, LI Zhong-Chao, MIAO Teng, YU Ye-Xin, ZHAO Yong-Jing, LI Yan, WANG Hai-Jun, WANG Hong-Zhu (1407)
Tidal Effects on Plankton Community and Size-Structure in the Huangmao Bay of the South China Sea	LIU Zi-Jia, LI Qian, CHEN Yin-Chao, SHUAI Yi-Ping, MA Meng-Zhen (1417)
Microbial Diversity on Surface of Black-Shell <i>Crassostrea Gigas</i>	LI Ling-Ling, XIE Chao-Yi, SONG Hong-Ce, CHEN Xi, LIU Wen-Juan, HUANG Bao-Yu, ZHANG Mei-Wei, LIU Ya-Qiong, WEI Lei, WANG Xiao-Tong (1429)
Ingestion of Large Jellyfish <i>Aurelia Coerulea</i> by Black Sea Bream <i>Acanthopagrus Schlegelii</i>	LI Dong-Chen, ZHANG Fang (1437)
Outburst of <i>Creseis Acicula</i> in Southwest Daya Bay in July 2020	LIU Dai, YING Ke-Zhen, CAI Zhong-Hua, HUANG Hong-Hui, BI Hong-Sheng (1447)
Effects of Environmental Factors on Growth and Distribution of Young Chub Mackerel <i>Scomber japonicus</i> Along the Coast of Zhejiang in Spring	ZHU Wen-Bin, CUI Guo-Chen, HU Cui-Lin, ZHU Hai-Chen, WANG Ya-Li, JIANG Ri-Jin, ZHANG Ya-Zhou, FENG Chun-Lei (1455)
Molecular Identification of CC Motif Chemokine Receptor 3 (CCR3) Gene and Its Response to <i>Vibrio anguillarum</i> Infection in Ayu <i>Plecoglossus altivelis</i>	ZHANG Ling-Ling, YU Li, LI Chang-Hong, MIAO Liang, CHEN Jiong (1464)
Effects of Busulfan and Its Combined Treatment with High Temperature on Gonadal Development of Yellow Drum (<i>Nibea albiflora</i>)	YANG Lei, HU Wei-Hua, YU Yan-Jie, CHEN Rui-Yi, XU Dong-Dong (1473)
Development of Body Color and Formation Process of Black Spots in Spotted Scat (<i>Scatophagus argus</i>)	LIN Xiao-Zhan, ZHANG Jun-Peng, HUANG Yang, SHI Hong-Juan, LI Guang-Li, TIAN Chang-Xu (1485)
Comparative Transcriptome Analysis of the Head Kidney and Trunk Kidney in Adult Yellow Catfish (<i>Pelteobagrus fulvidraco</i>)	ZHONG Ai-Hua, DAI Xiao-Xin (1495)
Comparison in Growth and Nutrition of New Manila Clam Breed “ZC II” Cultured in Raft Hanging and Bottom Sowing Models	TIAN Yuan, JIN Yan, CHEN Wei, LI Cui-Cui,

WANG Fan, YU Xin, CHE Zong-Hao, LIU Kuo, LIANG Teng, HUO Zhong-Ming, YAN Xi-Wu (1505)
Load Variation of *Vibrio harveyi* in the Blood Clam *Tegillarca granosa*
.....YANG Qian-Yuan, TENG Shuang-Shuang, CAI Yi-Long, XIAO Guo-Qiang, CAI Xi-Li (1513)
Early Development of *Lottia goshimai* Revealed by Scanning Electron Microscopy
.....CUI Meng-Lu, HUAN Pin, LIU Bao-Zhong (1520)
Temporal and Spatial Variation of Giant Clams (Tridacninae) Resources in Coastal Waters of Hainan: a Case Study
of Wuzhizhou Island
.....LI Meng, LI Xiu-Bao, GU Zhi-Feng, XIA Jing-Quan, WANG Ai-Min, LIU Chun-Sheng (1529)
Identification, Characterization, and Expression Analysis of a GnRH-like Gene at Mature Stage in the Cephalopod
Sepiella japonica (Sepiidae).....WU Jun-Hong, CAO Zi-Hao, ZHENG Li-Bing, CHI Chang-Feng (1539)
Preliminary Study on the Migration Characteristic of Two Loligo Species in the Northern South China Sea Based
on Otolith Microchemistry JIN Yue, LI Nan, YU Jun, FANG Zhou, CHEN Xin-Jun (1548)
Study on the Characteristics of Behavior Ethogram in Reproductive Period of *Sepiella japonica*CHEN Jia-Yi,
.....LONG Jin-Xia, XU Han-Xiang, ZHANG Tao, SHI Hui-Lai, XU Kai-Da, LIANG Jun (1556)
Current Situation and Seasonal Variation of Fishery Resources in Tropical Marine Ranch in Wuzhizhou Island,
Sanya, Hainan.....WANG Xin-Yuan, LI Jian-Long, ZHANG Xiang, CHEN Meng-Ling, WU Pei-Lin,
MA Wen-Gang, PENG Si-Ying, ZHANG Xi, XIE Jian-Jun, GAO Fei, XU Qiang, WANG Ai-Min (1566)
The Reproductive Regulation of *Piwi* in Bisexual *Artemia franciscana*
.....REN Yi-Zhuo, HAN Xue-Kai, ZUO Jia-Jun, OUYANG Xue-Mei, DUAN Hu, SUI Li-Ying (1576)