

# 水产学报 2019 年 第 43 卷 第 8 期

## 目 次

大黄鱼 *sox9a/b* 基因的克隆与表达分析

..... 张 梦, 朱阳阳, 李完波, 沈伟良, 吴雄飞, 叶 坤, 王志勇 (1691)

草鱼 7 个插入 / 缺失型突变多态性及与幼鱼生长性状关联分析

..... 张 猛, 沈玉帮, 徐晓雁, 王荣泉, 冷向军, 李家乐 (1706)

基于转录组测序技术筛选花鮰卵巢发育相关基因

..... 刘慧芬, 卢良盛, 王 静, 周传江, 顾钱洪, 马 晓, 冯军厂, 聂国兴, 李学军 (1714)

急性 pH 和碳酸盐碱度对缢蛏存活率、 $\text{Na}^+/\text{K}^+$ -ATPase 活性及血淋巴吞噬能力的影响

..... 叶 博, 程之扬, 彭茂潇, 牛东红, 刘晓军, 蓝天一 (1723)

斑马鱼心脏的显微与超微结构

..... 王新栋, 孙雪婧, 赵巧雅, 黄宇飞, 陈秋生, 林金杏 (1733)

山东南部近海口虾蛄空间分布特征及其季节变化

..... 李明坤, 徐宾铎, 薛 莹, 张崇良, 任一平, 王 晶 (1749)

山东半岛东南部海域星康吉鳗资源密度时空分布及其与环境因子之间关系

..... 牟秀霞, 李明坤, 尹 洁, 张崇良, 任一平 (1759)

水体盐度对雌性三疣梭子蟹生长、卵巢发育、渗透压调节、代谢和抗氧化能力的影响

..... 龙晓文, 吴仁福, 侯文杰, 潘桂平, 成永旭, 吴旭干 (1768)

三峡水库生态调度对长江监利江段四大家鱼早期资源的影响

..... 周 雪, 王 珂, 陈大庆, 刘绍平, 段辛斌, 汪登强, 高 雷 (1781)

菲律宾蛤仔垦区育苗技术优化及其对池塘理化环境、浮游植物和稚贝生长的影响

..... 祁剑飞, 郑雅友, 巫旗生, 宁 岳, 郭 香, 曾志南, 贾圆圆 (1790)

碳源添加方式对循环水养殖系统中微生物悬浮生长反应器水处理的影响

..... 刘文畅, 谭洪新, 罗国芝, 陈 伟, 张南南, 于永霞, 姚妙兰, PIMPRON Pronapinyakun(1798)

摄食不同蛋白质水平饲料的珍珠龙胆石斑鱼幼鱼生长与血清激素和消化酶活性的相关性分析

..... 郭鑫伟, 谭北平, 迟淑艳, 董晓慧, 杨奇慧, 刘泓宇, 章 双 (1808)

LED 光谱对舌齿鲈幼鱼摄食、生长和能量分配的影响

..... 任纪龙, 魏平平, 费 凡, 代明允, 马 贺, 高东奎, 宋昌斌, 陈 涛, 刘 鹰 (1821)

传染性造血器官坏死病毒表面糖蛋白基因核酸疫苗的构建及对虹鳟血液生化指标的影响

..... 何琦瑶, 魏文燕, 汪开毓, 刘家星 (1830)

不同解冻方式反复冻融对金乌贼蛋白质分子间作用力的影响

..... 张洪超, 薛张芝, 丁 源, 徐晓蓉, 金 洋, 李和生, 王鸿飞, 许 凤 (1839)

中国水产学会《水产学报》大事记

# JOURNAL OF FISHERIES OF CHINA

Vol.43, No.8, 2019

## CONTENTS

Cloning and expression of *sox9a/b* gene in the large yellow croaker (*Larimichthys crocea*)

..... ZHANG Meng, ZHU Yangyang, LI Wanbo, SHEN Weiliang, WU Xiongfei, YE Kun, WANG Zhiyong(1691)

Polymorphism of seven insert/deletion mutations and their connection with growth traits of juvenile grass carp

(*Ctenopharyngodon idella*)

..... ZHANG Meng, SHEN Yubang, XU Xiaoyan, WANG Rongquan, LENG Xiangjun, LI Jiale(1706)

Transcriptome analysis of spotted steed (*Hemibarbus maculatus* Bleeker) to identify genes related to ovary development

..... LIU Huifen, LU Liangsheng, WANG Jing, ZHOU Chuanjiang, GU Qianhong, MA Xiao, FENG Junchang, NIE Guoxing, LI Xuejun(1714)

Effects of pH and carbonate alkalinity on survival rate,  $\text{Na}^+/\text{K}^+$ -ATPase activity and phagocytic activity of the razor clam

(*Sinonovacula constricta*)

..... YE Bo, CHENG Zhiyang, PENG Maoxiao, NIU Donghong, LIU Xiaojun, LAN Tianyi (1723)

Microstructure and ultrastructure of zebrafish heart

..... WANG Xindong, SUN Xuejing, ZHAO Qiaoya, HUANG Yufei, CHEN Qiusheng, LIN Jinxing(1733)

Spatial distribution characteristics and seasonal variation of *Oratosquilla oratoria* in the southern coastal waters of Shandong Province

..... LI Mingkun, XU Binduo, XUE Ying, ZHANG Chongliang, REN Yiping, WANG Jing(1749)

Relationship between spatio-temporal distribution of *Conger myriaster* and the environment factors in the southeast waters of Shandong Peninsula

..... MU Xiuxia, LI Mingkun, YIN Jie, ZHANG Chongliang, REN Yiping(1759)

Effects of water salinity on the growth, ovarian development, osmoregulation, metabolism and antioxidant capacity of adult female swimming crab (*Portunus trituberculatus*)

..... LONG Xiaowen, WU Renfu, HOU Wenjie, PAN Guiping, CHENG Yongxu, WU Xugan(1768)

Effects of ecological operation of Three Gorges Reservoir on larval resources of the four major Chinese carps in Jianli section of the Yangtze River

..... ZHOU Xue, WANG Ke, CHEN Daqing, LIU Shaoping, DUAN Xinbin, WANG Dengqiang, GAO Lei(1781)

Optimization of the Manila clam (*Ruditapes philippinarum*) breeding technique in diked tidal flat and the impact on physicochemical indices, phytoplankton community and juvenile growth performance

..... QI Jianfei, ZHENG Yayou, WU Qisheng, NING Yue, GUO Xiang, ZENG Zhinan, JIA Yuanyuan(1790)

Effects of feeding methods of carbon sources on the water treatment of suspended growth reactors in a recirculating aquaculture system

..... LIU Wenchang, TAN Hongxin, LUO Guozhi, CHEN Wei, ZHANG Nannan, YU Yongxia, YAO Miaolan, PIMPRON Pronapinyakun(1798)

Correlation analysis of fish growth performance and serum hormone and digestive enzyme activities of juvenile pearl gentian grouper (*Epinephelus lanceolatus*♂ × *E. fuscoguttatus*♀) fed with different protein levels diets

..... GUO Xinwei, TAN Beiping, CHI Shuyan, DONG Xiaohui, YANG Qihui, LIU Hongyu, ZHANG Shuang(1808)

Effects of LED spectrum on feeding, growth and energy distribution of juvenile *Dicentrarchus labrax*

..... REN Jilong, WEI Pingping, FEI Fan, DAI Mingyun, MA He, GAO Dongkui, SONG Changbin, CHEN Tao, LIU Ying(1821)

Construction of glycoprotein gene nucleic acid vaccine against infectious hematopoietic necrosis, and its effect on serum biochemical indices

..... HE Qiyao, WEI Wenyan, WANG Kaiyu, LIU Jiaxing (1830)

Effects of different thawing ways and multiple freeze-thaw cycles on myofibrillar protein intermolecular force of *Sepia esculenta*

..... ZHANG Hongchao, XUE Zhangzhi, DING Yuan, XU Xiaorong, JIN Yang, LI Hesheng, WANG Hongfei, XU Feng (1839)