



İSTANBUL
UNIVERSITY
PRESS

AQUATIC SCIENCES and ENGINEERING

VOLUME: 36 ISSUE: 3 2021 E-ISSN 2602-473X

Indexing and Abstracting

Web of Science - Emerging Sources Citation Index (ESCI)

SCOPUS

TÜBİTAK-ULAKBİM TR Dizin

Zoological Record

Biological Abstracts

BIOSIS Previews

CAB Abstract

SciLit

DOAJ



Scopus®

Clarivate
Analytics

ZOOLOGICAL RECORD



Clarivate
Analytics

BIOLOGICAL ABSTRACTS

Clarivate
Analytics

BIOSIS PREVIEWS



DOAJ | DIRECTORY OF
OPEN ACCESS
JOURNALS

Owner

Prof. Dr. Melek İřinibilir Okyar
Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey

Responsible Manager

Prof. Dr. Devrim Memiř
Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey

Correspondence Address

Istanbul University Faculty of Aquatic Sciences,
Ordu Caddesi No: 8 34134 Laleli-Fatih / İstanbul, Turkey
E-mail: ase@istanbul.edu.tr
<https://iupress.istanbul.edu.tr/tr/journal/ase/home>

Publisher

Istanbul University Press
İstanbul University Central Campus, 34452 Beyazıt,
Fatih / İstanbul, Turkey
Phone: +90 (212) 440 00 00

Cover Photo

Ferhan ořkun
E-mail: fcoskun@gmail.com
Instagram: instagram.com/exultsoul

Authors bear responsibility for the content of their published articles.

The publication language of the journal is English.

This is a scholarly, international, peer-reviewed and open-access journal published quarterly in January, April, July, and October.

Publication Type: Periodical

EDITORIAL MANAGEMENT

Editor-in-Chief

Prof. Dr. Devrim Memiş

Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey - mdevrim@istanbul.edu.tr

Co-Editor in Chief

Prof. Dr. Özkan Özden

Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey - ozden@istanbul.edu.tr

Language Editors

Alan James Newson

Istanbul University, Department of Foreign Languages, İstanbul, Turkey - alan.newson@istanbul.edu.tr

Elizabeth Mary Earl

Istanbul University, Department of Foreign Languages, İstanbul, Turkey - elizabeth.earl@istanbul.edu.tr

EDITORIAL BOARD

Prof. Dr. Genario Belmonte - University of Salento, Italy - genuario.belmonte@unisalento.it

Prof. Luis M. Botana - Santiago de Compostela University, Santiago-de-Compostela, Spain - luis.botana@usc.es

Prof. Dr. Carsten Harms - Applied University Bremerhaven, Germany - charms@hs-bremerhaven.de

Prof. Dr. Konstantinos Kormas - University of Thessaly, Greece - kkormas@uth.gr

Prof. Dr. Sergi Sabater - Institute of Aquatic Ecology, Spain - sergi.sabater@udg.edu

Prof. Dr. Maya Petrova Stoyneva-Gaertner - Sofia University "St Kliment Ohridski", Bulgaria - mstoyneva@abv.bg

Prof. Dr. Nuray Erkan - Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey - nurerkan@istanbul.edu.tr

Prof. Dr. Reyhan Akçaalan - Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey - akcaalan@istanbul.edu.tr

Prof. Dr. Firdes Saadet Karakulak - Istanbul University, Faculty of Aquatic Sciences, İstanbul, Turkey - karakul@istanbul.edu.tr

Prof. Dr. Lukas Kalous Czech - University of Life Sciences, Czech - kalous@af.czu.cz

Dr. Klaus Kohlmann - Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany - kohlmann@igb-berlin.de

Dr. Pierantonio Addis - University of Cagliari, Italy - addisp@unica.it

Dr. Nico Salmaso - Research and Innovation Centre, Italy - nico.salmaso@fmach.it

Dr. Petra Visser - University of Amsterdam, Netherlands - P.M.Visser@uva.nl

Aims and Scope

Aquatic Sciences and Engineering is an international, scientific, open access periodical published in accordance with independent, unbiased, and double-blinded peer-review principles. The journal is the official publication of İstanbul University Faculty of Aquatic Sciences and it is published quarterly on January, April, July, and October. The publication language of the journal is English and continues publication since 1987.

Aquatic Sciences and Engineering aims to contribute to the literature by publishing manuscripts at the highest scientific level on all fields of aquatic sciences. The journal publishes original research and review articles that are prepared in accordance with the ethical guidelines.

The scope of the journal includes but not limited to; aquaculture science, aquaculture diseases, feeds, and genetics, ecological interactions, sustainable systems, fisheries development, fisheries science, fishery hydrography, aquatic ecosystem, fisheries management, fishery biology, wild fisheries, ocean fisheries, biology, taxonomy, stock identification, functional morphology freshwater, brackish and marine environment, marine biology, water conservation and sustainability, inland waters protection and management, seafood technology and safety.

The target audience of the journal includes specialists and professionals working and interested in all disciplines of aquatic sciences.

The editorial and publication processes of the journal are shaped in accordance with the guidelines of the International Committee of Medical Journal Editors (ICMJE), World Association of Medical Editors (WAME), Council of Science Editors (CSE), Committee on Publication Ethics (COPE), European Association of Science Editors (EASE), and National Information Standards Organization (NISO). The journal is in conformity with the Principles of Transparency and Best Practice in Scholarly Publishing (doaj.org/bestpractice).

Aquatic Sciences and Engineering is covered in Clarivate Analytics Web of Science Emerging Sources Citation Index

(ESCI), Clarivate Analytics Zoological Record, Biological Abstracts, BIOSIS Previews, Scopus, DOAJ, Scilit, TUBITAK ULAKBIM TR Index and CAB Abstracts.

Processing and publication are free of charge with the journal. No fees are requested from the authors at any point throughout the evaluation and publication process. All manuscripts must be submitted via the online submission system, which is available at <https://dergipark.org.tr/ase>. The journal guidelines, technical information, and the required forms are available on the journal's web page.

All expenses of the journal are covered by the İstanbul University Faculty of Aquatic Sciences. Potential advertisers should contact the Editorial Office. Advertisement images are published only upon the Editor-in-Chief's approval.

Statements or opinions expressed in the manuscripts published in the journal reflect the views of the author(s) and not the opinions of the İstanbul University Faculty of Aquatic Sciences, editors, editorial board, and/or publisher; the editors, editorial board, and publisher disclaim any responsibility or liability for such materials.

All published content is available online, free of charge at <https://dergipark.org.tr/ase>. Printed copies of the journal are distributed to the members of the İstanbul University Faculty of Aquatic Sciences, free of charge.

İstanbul University Faculty of Aquatic Sciences holds the international copyright of all the content published in the journal.



Editor in Chief: Prof. Devrim MEMİŞ

Address: İstanbul Üniversitesi Su Bilimleri Fakültesi Yetiştiricilik Anabilim Dalı Ordu Cad. No:8 34134 Laleli / İstanbul, Türkiye

Phone: +90 212 4555700/16448

Fax: +90 212 5140379

E-mail: mdevrim@istanbul.edu.tr

Contents/İçindekiler

Research Article

The use of Aloe Vera Gel Functionalized Biogenic Zinc-Oxide Nanoparticles Against Fish Putative Pathogens <i>Puja Pati, Kausik Mondal, Madhusudan Mandal</i>	101
Host Selection of <i>Potomida semirugata</i> (Unionidae: Bivalvia) in Reproduction Strategy <i>Hülya Şereflişan</i>	109
Determination of Benthic Macroinvertebrate Fauna and Some Physicochemical Properties of Balaban Lake (Menderes- Izmir) <i>Alperen Ertaş, Tugba Boz, İnci Tuney Kızılkaya</i>	116
Digenean Parasites of Labrid Fishes (Labridae: <i>Symphodus</i>) from Turkish Coasts of the Black Sea: New Records <i>Türkey Öztürk, Arzu Güven</i>	126
Catch Performance of Deep Water Cast Nets Used for Whiting along the Turkish Coast of the Black Sea (Turkey) <i>Uğur Karadurmuş, Ertuğ Düzgüneş, Mehmet Aydın</i>	133
Some Aspects of Reproduction in <i>Amblypharyngodon mola</i> from Sylhet, Northeast Bangladesh <i>Mohammad Amzad Hossain</i>	140
Upgrading Air Distribution System in the Thermal Units for Fish and Meat Products Aiming at Improving Efficiency of Heat-exchange Processes <i>Nina Usatenko, Sergii Verbytskyi</i>	146
The changes in Alkaline, Neutral and Acid Protease Activities of <i>Artemia</i> Enriched with Commercial Emulsion and Different Additive Combinations <i>Mehmet Naz, Gürkan Diken, Metin Yazıcı, Yavuz Mazlum, Selin Sayın, Oktay Söyler</i>	152