Egyptian Journal of

Aquatic Research

Volume 37 Number 2 2011

ISSN 1687-4285

Egyptian Journal of Aquatic Research

A Scientific Publication of National Institute of Oceanography and Fisheries

President of NIOF: Prof. Mohamed Attia Shreadah

Chief Editor: Prof. Fatma Aly Abd El-Razek

General Editor: Prof. Soliman Hamed Abd El-Rahman

Check of referee comments Editor: Prof. Sawsan Mohamed Aboul Ezz

Formatting Editor: Prof. Ahmed El Nemr Prof. Azza M. Khaled

Board of Advisors

Prof. Abdou Al Sayes Prof. Ahmed Mohamed Ibrahim Prof. Aida Botros Tadros Prof. Ajai Kumara Srivastav Prof. Alexandru Bologa Prof. Hosny Ibrahim Emara Prof. Jordi Lleonart Prof. Magda Ismail Zaki	Egypt Egypt Egypt India Romania Egypt Italy Egypt	Prof. Mohamed Ahmed Said Prof. Mohamed Ibrahim El Samra Prof. Morad Bacily Awad Prof. N. G. Pillai Prof. Selim A. Morcos Prof. Victoria Radchenko Prof. Zeinab Mahmoud El-Sherief Prof. Wagdy Labib Gerges	Egypt Egypt Egypt India USA Ukraine Egypt Egypt
Prof. Magda Ismail Zaki Prof. Makram Amin Gerges	Egypt Egypt	Prof. Wagdy Labib Gerges	Egypt

The Egyptian Journal of Aquatic Research is published by the National Institute of Oceanography & Fisheries. The Journal is devoted to the publication of original papers and reviews in all branches of aquatic sciences (Oceanography, Limnology, Fisheries, Aquaculture and environmental sciences). One volume is published annually containing four numbers.

Address and Communications

Address: Al-Anfushi, Kayet bay, Alexandria, Egypt. P.O. Box: 21556

Tel: +203-4807138, +203-4807140 Fax: +203-4801174

Web site: www.niof.sci.eg and www.nodc-egypt.org; E-mail: niof@hotmail.com

Contacts:

All correspondences are to the chief Editor:

Prof. Fatma Aly Abd El-Razek E-mail: fatma_abdelrazek@hotmail.com

The Egyptian Journal of Aquatic Research is a core Journal for ASFA bibliographic database since first volume and is also abstracted in both of Zological Record and Chemical Abstract Since Volume 31(1), 2005.

Egyptian Journal of Aquatic Research

A Scientific Publication of National Institute of Oceanography and Fisheries

President of NIOF: Prof. Mohamed Attia Shreadah

Chief Editor: Prof. Fatma Aly Abd El-Razek

Editorial Board: Prof. Soliman Hamed Abd El-Rahman

Prof. Ahmed El Nemr

Formatting Editor: Prof. Azza M. Khaled

Reviewing Editor: Prof. Sawsan Mohamed Aboul Ezz

Board of Advisors

The Egyptian Journal of Aquatic Research is published by the National Institute of Oceanography & Fisheries. The Journal is devoted to the publication of original papers and reviews in all branches of aquatic sciences (Oceanography, Limnology, Fisheries, Aquaculture and environmental sciences). One volume is published annually containing four numbers.

Address and Communications

Address: Al-Anfushi, Kayet bay, Alexandria, Egypt. P.O. Box: 21556

Tel: +203-4807138, +203-4807140 Fax: +203-4801174

Web site: www.niof.sci.eg and www.nodc-egypt.org; E-mail: niof@hotmail.com

Contacts:

All correspondences are to the chief Editor:

Prof. Fatma Aly Abd El-Razek E-mail: fatma_abdelrazek@hotmail.com

The Egyptian Journal of Aquatic Research is a core Journal for ASFA bibliographic database since first volume and is also abstracted in both of Zological Record and Chemical Abstract Since Volume 31(1), 2005.

Editorial

The Egyptian Journal of Aquatic Research is issued by the National Institute of Oceanography and Fisheries of Egypt, as its scientific platform for communication. The Journal started to appear under the present title in 2005 as a replacement to the former Institute's Bulletin entitled "Bulletin of the Institute of Oceanography and Fisheries". As of this issue, the Journal is taking a new improved format to meet the international standards of such journals, and will appear at a frequency of four issues per year.

The Journal continues to publish genuine scientific research papers dealing with original research work carried out by Egyptian and international scientists. In order to cope with the present-day multidisciplinary nature of aquatic research, and the ever increasing interest in the applied research, the scope of the Journal has been widened to cover both basic and applied research on marine waters, coastal areas, lakes, lagoons, rivers and estuarine regions, and on problems and opportunities relevant to their living and non-living resources.

The journal focuses specifically on four main areas of research and studies, namely Oceanography, Limnology, Fisheries and Aquaculture. Original research papers, and possibly selected review articles, on topics relevant to one or more of the above areas are therefore welcomed for publication. Submission of multidisciplinary papers is also encouraged.

Priority is usually given to papers dealing with results of applied research that are oriented towards problem-solving, without excluding original papers dealing with basic aspects of aquatic research. Papers are judged on the basis of their scientific merits and originality, their scientific contribution to the state of the art and their pertinence to the goals of the Journal. Prior to acceptance, all papers submitted for publication are peer reviewed by two qualified referees from the Journal's Editorial Board.

The Editorial Board is chaired by Prof. Dr. Fatma Aly Abdel Razek, and constitutes of a number of distinguished and highly qualified scientists in all disciplines covered by the Journal's scope of interest. The Board members are from within and outside Egypt, who enjoy a long-standing scientific reputation at the international level, and have worked for several years in their respective areas of specializations and on different parts of the world ocean.

The Journal has been abstracted in ASFA abstract since first volume as well as both of Zoological Records and Chemical Abstracts since Volume 30(1), 2005.

It is with great pleasure and honor that I hereby introduce our Journal in its "new look", with the hope that it will meet the utmost satisfaction of its readership.

Prof. Dr. Fatma A. Abdel Razek Chief Editor

Alexandria, Egypt, March 2011

Egyptian Journal of Aquatic Research

Vol. 37, No. 1, 2011

Contents

103-121	Aquatic pollution and its effects on fish population Abaza, Kh.M.
123-130	Toxicological studies on puffer fishes, Lagocephalus sceleratus and Amblyrhynchotes hypeslogenion in Suez Gulf, Red Sea, Egypt
101 107	Abd allah El sayed Ali, Mohamed Nasr Eldin Gomaa and Hanan Mohamed Othman
131-137	Deep Sea Shrimp Resources in the South Eastern Mediterranean Waters of Egypt Mohamed A. Ibrahim*, Mohamed W. A. Hasan, Alaa M. M. El-Far, El-Sayed F. E. Farrag and
	Mahmoud M. S. Farrag
139-145	Growth, mortality and exploitation of European hake <i>Merluccius merluccius</i> in the Moroccan
137 113	North Atlantic Sea
	Sadia Belcaid and Md. Sagir Ahmed
147-159	Heavy metals concentrations and condition of some fish species at two hot spots,
	Mediterranean coast, Alexandria, Egypt
	Mohamed A. Sayed Ahmed, Laila M. Shakweer, Hoda A. Hemaida and Abdou A. Alsayes
161-171	Impact of drainage effluents on the condition of Cichlid (tilapias) fish in Lake Edku, Egypt
.==	Mohamed A. Sayed Ahmed
173-182	Monitoring of some heavy metals and wellbeing status of some fish species from middle
	Alexandria and Sidi-Barany areas Mediterranean coast, Egypt
183-189	Mohamed A. Sayed Ahmed, Laila M. Shakweer, Hoda A. Hemaida and Abdou A. Alsayes Relationship between frozen pre-storage period of raw tilapia and mullet fish and quality
103-107	criteria of its cooked products
	S. A. El-Sherif, S. M. albrahim and Mohamed Abou-Taleb
191-197	Assessment of Apparent Digestibility Coefficients (ADCs %) of some Animal Protein Sources
	by Gilthead Sea bream (Sparus aurata)
	H.A. Mabrouk and A.M. Nour
199-208	Response of Nile Tilapia (Oreochromis niloticus) fingerlings to different replacement levels of
	fish meal with soybean meal using garlic and onion
	H.A. Mabrouk, Eman M. H. Labib and M.A. Zaki
i-iv	Guidelines for Authors for Manuscript Preparation