

COVER PHOTOGRAPH AND FRONT MATTER: COASTAL SEGMENT ALONG TRANROSSAN BAY, DONEGAL, IRELAND

Source: Journal of Coastal Research, 31(2)

Published By: Coastal Education and Research Foundation

URL: https://doi.org/10.2112/1551-5036-31.2.ii

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Journal of

Coastal Research

VOL. 31, NO. 2 • CERF • March 2015



Published by



Vears of Service

An International Forum for the Littoral Sciences

Charles W. Finkl Editor-in-Chief



Year of Service

JOURNAL OF COASTAL RESEARCH

An International Forum for the Littoral Sciences

CHEF-HERAUSGEBER

EDITOR-IN-CHIEF Charles W. Finkl

Coastal Education and Research Foundation, Inc. [CERF]

Editorial Offices:

5130 NW 54th Street(Editorial Office, Coconut Creek) Coconut Creek, FL CERF/JCR Website: http://www.CERF-JCR.org 33073, U.S.A. e-mail: cfinkl@cerf-jcr.com

Fletcher, NC 28732, U.S.A.

25 Jake Ridge Trail

BOOK REVIEW EDITOR J. Andrew G. Cooper School of Environmental Sciences University of Ulster Coleraine, N. Ireland

DEPUTY EDITOR-IN-CHIEF

Christopher Makowski Coastal Education and Research Foundation, Inc. [CERF] 5130 NW 54th Street Coconut Creek, FL 33073, U.S.A. cmakowski@cerf-jcr.com

EDITORIAL ASSISTANT

Barbara Russell Coastal Education and Research Foundation, Inc. [CERF] 5130 NW 54th Street Coconut Creek, FL 33073, U.S.A. barbara@cerf-jcr.com

WEB DESIGN & DEVELOPMENT

Jon Finkl Media Mine 111 W Washington, Suite 1100 Chicago, IL 60602, U.S.A. jon@mediamine.net

RÉDACTEUR-EN-CHEF

MITHERAUSGEBER

jag.cooper@ulster.ac.uk

Edward J. Anthony Coastal Geomorphology Dunkerque, France

Kenneth Banks Coral Reef Geomorphology Plantation, Florida

Patrick Barnard Coastal Geomorphology Santa Cruz, California

Lindino Benedet Oceanography, Modeling Florianopolis, SC, Brazil

David M. Bush Coastal Geology & Hazards Carrollton, Georgia

Ilya V. Buynevich Coastal Geology Philadelphia, Pennsylvania

Javier A. Carrió Sediment Processes Valencia, Spain Mark Crowell

Coastal Zone Management McLean, Virginia Robert Dean

Coastal Engineering & Processes Gainesville, Florida Omar Defeo

Sandy Beach Ecology Montevideo, Uruguay J. Javier Diez Coastal Geomorphology

Madrid, Spain Joseph F. Donoghue Coastal Morphology & Hazards Tallahassee, Florida

Jean Ellis Aeolian Sediment Transport Columbia, South Carolina

Luciana Esteves Coastal Flooding & Erosion Bournemouth, United Kingdom

Oscar Manuel Ferreira Storm Impacts Faro, Portugal

Duncan M. FitzGerald Sediment Transport Boston, Massachusetts Chip Fletcher

Coastal Geology Honolulu, Hawaii

Kazimierz K. Furmańczyk Marine Cartography

Szczecin, Poland

Gary B. Griggs Coastal Engineering & Hazards Santa Cruz, California

Pramod Hanamgond Coastal Geomorphology Belgaum, India

Hans Hanson Coastal Protection Lund, Sweden

Simon Haslett Paleoceanography Wales, United Kingdom

David Hill Nearshore Hydrodynamics Corvallis, Oregon

Michael Hilton Dune Geomorphology & Ecology Dunedin, New Zealand

Carl H. Hobbs, III Coastal Geology, Sand Mining Gloucester Point, Virginia

James R. Houston Sea-Level Change Vicksburg, Mississippi

Wenrui Huang $Coastal\ Hydrodynamics$ Tallahassee, Florida

Michael G. Hughes Coastal Morphodynamics Canberra, ACT, Australia

Federico I. Isla Sea-Level Change Mar Del Plata, Argentina

Nancy L. Jackson Coastal Geomorphology Newark, New Jersey

Markes E. Johnson Paleoshores, Coastal Sand Dunes Williamstown, Massachusetts

Timothy R. Keen Waves & Circulation Stennis Space Center, Mississippi

Dieter H. Kelletat

Coastal Geomorphology Essen/Cologne, Germany

ASSOCIATE EDITORS

Joseph T. Kelley Sea-Level Change Orono, Maine

Sved Khalil

Coastal Geology & Geophysics Baton Rouge, Louisiana

Jack Kindinger Oceanography St. Petersburg, Florida Vic Klemas

Remote Sensing Newark, Delaware

Nobuhisa Kobayashi Coastal Engineering Newark, Delaware Vladimir N. Kosmynin

Coral Reefs, Coastal Ecology Tallahassee, Florida Joseph L. Kowalski Estuarine Plant Ecology Edinburg, Texas

Michael J. Lace Coastal Landforms & Processes West Branch, Iowa

Stephen P. Leatherman Barrier Islands, Beach Erosion Miami, Florida Charles Lemckert

Environmental Fluid Dynamics Queensland, Australia Ioannis Liritzis

 $Geophysical\ Proxy\ Data \\ Rhodes,\ Greece$ Jeffrey H. List

Shoreline Change Processes Woods Hole, Massachusetts Michel M. de Mahiques

Sediment Processes São Paulo, Brazil

Gonzalo C. Malvárez-Garcia Beach Morphodynamics Seville, Spain Ashish J. Mehta

Coastal Engineering Gainesville, Florida

Nobuo Mimura Environmental Engineering Ibaraki, Japan

Robert Nicholls

Global Climate Change Southampton, United Kingdom Karl F. Nordstrom

Coastal Geomorphology New Brunswick, New Jersey

Julian Orford Gravel Beaches, Storm Events

Belfast, Northern Ireland, UK Phil D. Osborne Sediment Dynamics Shoreline, Washington

Hugh Parker Airborne Lidar Bathymetry

Adelaide, SA, Australia Charitha B. Pattiaratchi Physical Oceanography

Crawley, WA, Australia Carlos Pereira da Silva Coastal Zone Management

Lisbon, Portugal Michael Phillips Coastal Geomorphology Swansea, Wales, UK

Orrin H. Pilkey, Jr. Coastal Geology Durham, North Carolina

Paolo A. Pirazzoli Sea-Level Changes

Paris, France Nobert P. Psuty Coastal Geomorphology New Brunswick, New Jersey

Ulrich Radtke Coastal Geomorphology Duisburg-Essen, Germany

Elijah W. Ramsey, III Coastal Image Processing Lafayette, Louisiana

Kirt Rusenko Sea Turtles, Dune Restoration Boca Raton, Florida

Anja Scheffers Coastal Evolution Lismore, NSW, Australia

Andrew D. Short Coastal Geomorphology Sydney, NSW, Australia

COMITÉ DE REDACTION

Pravi Shrestha Coastal Engineering Irvine, California

Alejandro J. Souza

Coastal & Sediment Processes Liverpool, United Kingdom Tom Spencer

BiogeomorphologyCambridge, United Kingdom **Marcel Stive**

Coastal Hydrodynamics Delft, The Netherlands Vallam Sundar

Coastal Engineering Chennai, India

Adam D. Switzer Coastal Hazards, Sea-Level Change NTU, Singapore E. Robert Thieler

Marine Geology Woods Hole, Massachusetts Arthur C. Trembanis

Coastal Morphodynamics Newark, Delaware Frank Van Der Meulen

 $Coastal\ Zone\ Management$ Delft, The Netherlands

Ian J. Walker Coastal Dunes & Sediments Victoria, BC, Canada Ping Wang

Beach Morphodynamics Tampa, Florida Allan Williams

Coastal Geology Swansea, Wales, UK Harry F. Williams Paleotempestology Denton, Texas

Colin D. Woodroffe Coastal Geomorphology Wollongong, Australia

Robert S. Young Coastal Processes Cullowhee, North Carolina

Guoliang Yu Sediment Transport Shangai, China





FOR INDIVIDUAL INTERNATIONAL CERF MEMBERS, \$519.00 FOR US INSTITUTIONS, AND \$541.00 FOR INTERNATIONAL INSTITUTIONS BY THE COASTAL EDUCATION AND RESEARCH FOUNDATION, INC. (CERF), 5130 NW 54TH STREET, COCONUT CREEK, FL 33073–3713. PERIODICALS POSTAGE PAID AT FORT LAUDERDALE, FL AND ADDITIONAL MAILING OFFICES. **POSTMASTER:** SEND ADDRESS CHANGES TO *JOURNAL OF COASTAL* RESEARCH, ALLEN PRESS ASSOCIATION MANAGEMENT, P.O. BOX 1897, LAWRENCE, KS 66044-3018.

© 2015 Coastal Education and Research Foundation, Inc. [CERF].

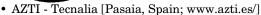
This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).



JOURNAL OF COASTAL RESEARCH

An International Forum for the Littoral Sciences

Supporting Scientific Institutions



- Coastal and Hydraulics Laboratory (CHL), US Army Corps of Engineers [Vicksburg, Mississippi, U.S.A.; http://chl.erdc.usace.army.mil/]
- Coastal and Marine Geology Program (CMGP), U.S. Geologic Survey (USGS) [Reston, Virginia, U.S.A.; http://marine.usgs.gov/]
- Coastal Research Laboratory (CRL), University of South Florida [Tampa, Florida, U.S.A.; http://crl.usf.edu/]
- Commission on Coastal System (CCS), International Geographical Union (IGU) [http://www.igu-ccs.org/]
- Consorzio Nazionale Interuniversitario per le Scienze del Mare (Co.N.I.S.Ma.) [Rome, Italy; www.conisma.it/]
- Deltares Institute [Delft, The Netherlands; http://www.deltares.nl/en/coast-sea]
- Departamento de Geografia e Planeamento Regional, Universidade Nova de Lisboa [Lisbon, Portugal; http://www.fcsh.unl.pt/]
- e-Geo Center for Geographical and Regional Planning Studies [Lisbon, Portugal; http://e-geo.fcsh.unl.pt/]
- Institute of Marine and Coastal Sciences (IMCS), Rutgers University [New Brunswick, New Jersey, U.S.A.; http://marine.rutgers.edu/main/]
- Louisiana Coastal Protection & Restoration Authority (CPRA) [Baton Rouge, Louisiana, U.S.A.; www.coastal. louisiana.gov/]
- Royal Belgian Institute of Natural Sciences: Management Unit of the North Sea Mathematical Models (MUMM).
 [Brussels, Belgium; www.mumm.ac.be/]
- University of Wales Trinity Saint David (Swansea Metropolitan University) [Mount Pleasant, Swansea, South Wales, U.K.; http://www.uwtsd.ac.uk/]

Aims and Scope of the Journal

Journal of Coastal Research, an International Forum for the Littoral Sciences, is dedicated to all aspects of coastal research. These include geology, biology, geomorphology (physical geography), climate, littoral oceanography, hydrography, coastal hydraulics, environmental (resource) management, engineering, and remote sensing. Although each field functions effectivelywithin itsownpurview, the cross-disciplinary nature of coastal studies requires familiarity with other fields as well. Hence, the scope of topics is necessarily broad in order to address the complexity of coastal biophysical and socio-economic interactions. Because of the wide range of interrelated topics, the journal invites original contributions and manuscripts dealing with theory, methodology, techniques, and field or applied topic studies on interdisciplinary coastal issues.

The journal encourages the dissemination of knowledge and understanding of the coastal zone by promoting cooperation and communication between specialists in different disciplines. Natural scientists, for example, are encouraged to collaborate with professionals in other fields to prepare contributions relating to the coastal zone that foster increased appreciation of coastal environments and processes. By means of this journal, with its scholarly and professional papers, systematic review articles, book and symposia reviews, communications and news, and special topical issues, an international forum for the development of integrated coastal research is provided.

Advertising, Editorial, and Subscription Information

Advertising and Editorial Office: All advertising and editorial correspondence should be sent to Dr. Charles W. Finkl, Editor-in-Chief, Journal of Coastal Research, 5130 NW 54th Street, Coconut Creek, FL 33073, U.S.A. PHONE: 828-333-2300. E-MAIL: cfinkl@cerf-jcr.com

Subscription Information: The Journal of Coastal Research is a bimonthly publication. Calendar-year (2015) print and online subscription prices for the JCR are: \$115.00 for US CERF members / \$125.00 for International CERF members (\$95.00 for online only), and \$519.00 for US institutions / \$541.00 for International institutions (\$437.00 for online only). Additional surface charges may apply to subscribers located outside of the USA. For additional membership and subscription forms and information, please go to www.CERF-JCR.org. To obtain a membership or subscription form by mail, please send request to Journal of Coastal Research, P.O. Box 7065, Lawrence, KS 66044. Back Issues and Special Issues of the JCR, when available, can be directly purchased at www.CERF-JCR.org.

The Journal of Coastal Research is currently surveyed in Applied Science & Technology Abstracts; Applied Science & Technology Index (H.W. Wilson); Aquatic Sciences & Fisheries Abstracts; BIOBASE; Biological Abstracts; BIOSIS Previews (Thomson); CAB International Abstracts (CABI); CSA Civil Engineering Abstracts (ProQuest); Current Awareness in Biological Sciences (Elsevier); Current Contents/Agriculture, Biology, & Environmental Sciences (Thomson); Ecology Abstracts (ProQuest); Environmental Sciences & Pollution Management; GeoAbstracts [Geographical Abstracts: Physical Geography; Ecological Abstracts; Geological Abstracts; GEOBASE] (Elsevier); GeoRef; Meteorological & Geoastrophysical Abstracts (ProQuest); Oceanic Abstracts (ProQuest); Oceanographic Literature Review (Elsevier); Physical Sciences Digest (CSA, Ebsco); Pollution Abstracts (ProQuest); Referativnyi Zhurnal; Science Citation Index; SciSearch (Thomson); SCOPUS; Water Resources Abstracts (Bethesda); Zoological Record (Thomson).



COVER PHOTOGRAPH





Coastal Segment along Tranrossan Bay, Donegal, Ireland. Tranrossan Bay is located in Donegal on Ireland's exposed northwest coast. The bay faces west into the prevailing swell, which together with a 3.5 m spring tide range maintains a wide tide-modified beach with low tide rips. This view shows the beach at high tide with waves breaking across the 150 m wide low gradient surf zone. While the main beach and surf zone are sandy, the small beaches in the foreground are composed of cobbles with a sand surf zone. One hundred and fifty meter high Gortnalughoge mountains, composed of metamorphic rocks, dominate the left horizon, with a township of the same name located in its lee. (Photograph taken 18 September 2013 by Andrew D. Short, School of Geosciences, University of Sydney, Australia.)

COASTAL EDUCATION AND RESEARCH FOUNDATION

5130 NW 54th Street Coconut Creek, FL 33073, U.S.A.

Officers of the Foundation

Founded in 1983 by: Charles W. Finkl, Sr. (Deceased), Charles W. Finkl, Jnr., Rhodes W. Fairbridge (Deceased), and Maurice L. Schwartz (Deceased)

President & **Executive Director:** Charles W. Finkl

Senior Vice President & **Assistant Director:** Christopher Makowski

Secretary:

Heather M. Vollmer

Executive Assistant:

Barbara Russell

Regional Vice Presidents

North America James R. Houston Sved Khalil Victor V. Klemas Orrin H. Pilkey, Jr.

South America Omar Defeo

Southeast Asia Nobuo Mimura

Western Europe

Carlos Pereira da Silva Marcel J.F. Stive

Eastern Europe Kazimierz K. Furmanczyk

Oceania

Charles Lemckert Andrew D. Short

Board of Directors (Trustees)

J. Andrew G. Cooper Victor V. Klemas Robert Dean Charles W. Finkl Gary B. Griggs James R. Houston Robert Huff Joseph T. Kelley

Charles Lemckert Chris Makowski Michael Phillips Orrin H. Pilkey, Jr. Norbert P. Psuty Elijah W. Ramsey, III

Andrew D. Short Carlos Pereira da Silva Daniel J. Stanley Marcel J.F. Stive Allan Williams

Lifetime Members

Yong-Sik Cho Nicholas K. Coch Hany Elwany

Björn Kjerfve Charles Lemckert Charles Thibault

Ya Ping Wang Wei Zhang

Patron Members

Luis Antonio **Buenfil-Lopez** Carl H. Hobbs, III Timothy W. Kana Norbert P. Psuty Giovanni Randazzo

Yung Tseng Robert S. Young

CERF Society Information

The Coastal Education and Research Foundation [CERF] is a nonprofit society dedicated to the advancement of the coastal sciences. The Foundation is devoted to the multi-disciplinary study of the complex problems of the coastal zone. The purpose of CERF is to help translate and interpret coastal issues for the public and to assist professional research and public information programs. The Foundation specifically supports and encourages field and laboratory studies on a local, national, and international basis. Through the medium of scientific publications, television, and radio CERF brings accurate information to the public and coastal specialists on all aspects of coastal issues in an effort to maintain or improve the quality of shoreline resources.

Because CERF is concerned with broad environmental issues, our efforts concentrate on significant problems such as maintenance of good quality (potable) water with adequate supply, and hazards associated with potential beach erosion, flooding, and susceptibility of developed shorelines to storm surge and wave attack. By focusing attention on these potential man-made and natural hazards, it is hoped that our research efforts will help others improve the quality of life in diverse coastal areas. CERF thus aims to stimulate awareness of coastal (marine and freshwater shorelines) land and water problems; initiate and foster research and innovation to promote long-term coastal productivity; establish an educational forum for the debate of contentious coastal issues; and develop new principles and approaches for enlightened coastal management, and encourage their adoption and use.



$\hfill\Box$ CERF MEMBERSHIP $\hfill\Box$

Members are individuals that support the aims of the foundation through personal and group efforts or by donations. Memberships are available in different categories with privileges.

Subscription information is available online at www.cerf-jcr.org. Subscriptions office: Allen Press, Inc., P.O. Box 1897, Lawrence, KS 66044, U.S.A. CERF@allenpress.com

Editor-in-Chief

Charles W. Finkl Ph.D., CSci, CMarSci, FIMarEST, CPGS, CPSSc, PWS. M.ASCE

Dr. Charles W. Finkl is President and Executive Director of the Coastal Education & Research Foundation (CERF), publisher of the JCR. Charlie, a founding editor of the Journal of Coastal Research, has served as Editor-in-Chief for the past 30 years. He is a Research Professor in the Department of Geosciences at Florida Atlantic University in Boca Raton, Florida. He received his Bachelor and Master of Science degrees from Oregon State University and the Ph.D. from the University of Western Australia. He is a member of more than 20 professional societies and has published more than 200 professional papers, books, and reports. He is a Chartered Marine Scientist (CMarSci) [Institute of Marine Engineering, Science and Technology], Certified Professional Geological Scientist (CPGS) [American Institute of Professional Geologists (AIPG),], Certified Professional Soil Scientist (CPSSc) [American Registry of Certified Professionals in Agronomy, Crops, and Soils], and a Professional Wetland Scientist (PWS) [Society of Wetland Scientists]. Charlie has field experience in parts of the USA, Caribbean area, Brazil, Honduras, Russia, South Africa, Western Europe, Australasia, and South Pacific islands. He is also the Series Editor of the Encyclopedia of Earth Sciences Series that is published by Springer (Germany). There are more than twenty-eight volumes in the Series and about twenty-five are available online. Charlie also serves on the Editorial Board of the International Journal of Environmental Studies (Routledge) and is an occasional peer reviewer for many other profes-

Charlie has interests and expertise in the general areas of surficial geology, coastal and marine geomorphology (including coastal classification), coastal/marine biophysical environments, exploration geochemistry, soils and weathering (regolith geology), coastal zone management and engineering applications or impacts on natural systems (including erosion control and shore protection), coastal hydrology including submarine freshwater and mineralized seeps, subaerial and marine structural geology, natural hazard mitigation in coastal zones, marine environments and coastal wetland protection and restoration, and remote sensing (e.g., land cover classification in coastal wetlands, advection-diffusion turbidity plumes in coastal waters, delineation of bottom types and sand resources), effluent disposal and pollution of wetlands and estuaries, water resources mapping and conservation, time series studies of wetland hydroperiod and soil moisture.

Official Meeting of CERF International Coastal Symposium (ICS)

The International Coastal Symposium (ICS) was originally set up by Per Bruun (deceased) and Charlie Finkl as the official meeting of the Coastal Education & Research Foundation (CERF), with one of the first meetings being held in Hilton Head, South Carolina, in 1993. After the repeated success of these meetings, CERF moved the ICS to the international scene holding these conferences in conjunction with local sponsors in Australia, Brazil, Iceland, New Zealand, Northern Ireland, Poland, and Portugal. The ICS brings together delegates from all over the world to collaborate and discuss the most current coastal research studies and projects. During the ICS 2014, which was held in Durban, South Africa, a grand celebration took place to mark the 30th Anniversary of CERF and the JCR. Our next ICS meeting is scheduled for March of 2016 in Sydney, New South Wales, Australia. For more information, please visit www.cerf-jcr.org.

Journal of Coastal Research

VOL. 31, NO. 2 (pages 233–518) ISSN 0749-0208 March 2015

CONTENTS

RESEARCH PAPERS

Coastal Mangrove Squeeze in the Mekong Delta	23
Ecological Correlates of Green Turtle (Chelonia mydas) Abundance on the Nearshore Worm Reefs of Southeastern Florida	24
Origin and Holocene Evolution of a Slightly Submerged Tidal Notch in the NE Adriatic	O.E
Interannual Variability of Two Offshore Sand Banks in a Region of Extreme Tidal Range	26
Mapping Coastal Information across Canada's Northern Regions Based on Low-Altitude Helicopter Videography in Support of Environ-	
mental Emergency Preparedness Efforts	
Jon Pasher, Jason Duffe, Bhavana Chaudhary, Huili Wang, and Tom Giles	27
Wave Refraction Pattern and Littoral Sediment Transport along the SE Tamilnadu Coast, India	29
Migration History and Habitat Use by Javelin Goby Synechogobius hasta as Inferred from Otolith Sr: Ca Ratios	
Sun Wan Hwang, Keun Hyung Choi, Hakbin Hwang, Chong Kwan Kim, and Tae Won Lee	29
Multiscale Burrow Site Selection of Gopher Tortoises (Gopherus polyphemus) in Coastal Sand Dune Habitat	30
Changes in Macrobenthic Faunal Community during Succession of a Mangrove Forest at Zhanjiang, South China	
Quan Chen, Jing Li, Limin Zhang, Hongfang Lu, Hai Ren, and Shuguang Jian	$\frac{31}{32}$
Evaluation of Two Spectral Wave Models in Coastal Areas	32
Scenarios	34
Remote Sensing of Irregular Breaking Wave Parameters in Field Conditions	34
A Model to Simulate Yacht Movements in Enclosed Bays	36
Monitoring Loss and Recovery of Salt Marshes in the Liao River Delta, China.	
	37
Seasonality of Ichthyofauna Bycatch in Shrimp Trawls from Different Depth Strata in the Southern Brazilian Coast	
José Roberto Verani, and João Pedro Barreiros	37
A Spatial and Seasonal Pattern of Water Quality in the Sundarbans River Systems of Bangladesh	
S.M. Bazlur Rahaman, Md. Sayadur Rahaman, Alokesh K. Ghosh, Dhiman Gain, Sudhin K. Biswas, Lipton Sarder, Shikder S. Islam, and Ashkar B. Sayeed	39
Seasonal Nitrate Algorithms for the Southwest Bay of Bengal Water Using in situ Measurements for Satellite Remote-Sensing Applications	99
Seasonai Nitrate Algorithms for the Southwest Bay of Bengar Water Osing in Sau Measurements for Satemite Remote-Sening Applications Ranjit Kumar Sarangi, Thirunavukarasu Thangaradjou, Durairaj Poornima, Ramalingam Shanthi, Ayyappan Saravana Kumar, and Thangavel Balasubramanian	39
A Tale of Two Ports: Dinoflagellate and Diatom Communities Found in the High Ship Traffic Region of Galveston Bay, Texas (USA)	
Jamie L. Steichen, Alexandra Denby, Rachel Windham, Robin Brinkmeyer, and Antonietta Quigg	4 0
Numerical Simulation for Wave Breaking on Bar/Step-Type Beach Profile	41
Preliminary Assessment of Submerged Beachrock and Tsunamigenic Deposit, Hasır Island, Marmara Archipelago, Turkey	41
Ahmet Ertek, Elçin Kılıç, Ahmet Evren Erginal, Yunus Levent Ekinci, and Alper Demirci Sea Surface Temperature Trends in the Coastal Zone of British Columbia, Canada	42
Carl L. Amos, S. Martino, T.F. Sutherland, and T. Al Rashidi	43
Hydrodynamics and Flushing of Coffin Bay, South Australia: A Small Tidal Inverse Estuary of Interconnected Bays	
Jochen Kämpf and Henry Ellis	44
Habitat Use Patterns of Chelon haematocheilus, as Revealed by Sr.Ca Ratios in Otoliths	45
Sun Wan Hwang, Tae Won Lee, Sun Do Hwang, Eun Kyung Lee, and Jae Myung Yoo Long-Term Shoreline Change at Kailua, Hawaii, Using Regularized Single Transect	40
Tiffany R. Anderson, L. Neil Frazer, and Charles H. Fletcher	46
Impact of Sea-Level Rise on Saltwater Intrusion in the Pearl River Estuary	47
TECHNICAL COMMUNICATIONS	
Geospatially Integrated Seafloor Classification Scheme (G-ISCS): A New Method for Cognitively Interpreting Benthic Biogeomorphological Features	48
Diver Depth-Gauge Profiling beyond Wading Depths: A New Simple Method for Underwater Surveying	
Jennifer L. Rahn, Heidi J.L. Lannon, and Joann Mossa	5 0
DEPARTMENTS	
Book Review	51
JCR Outside Reviewers 2014	51



