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Marine Science Journals and Serials: 1993-2003 Update

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ABSTRACT

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keywords: journals, marine science, oceanography, fisheries, aquaculture

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INTRODUCTION

Included within the marine sciences are the fields of biological, chemical, geological and physical oceanography, marine biology, fisheries, marine resources, and ocean and coastal zone management. The results of both basic and applied research appear in the approximately 385 English language titles published worldwide. The 30 new titles cover such subjects as ocean-atmosphere interaction, environmental protection, aquaculture and marine biotechnology. They include articles dealing with the depletion of fish stocks, endangered mammals and sea birds, the future exploitation of mineral deposits on volcanic hot springs, the use of satellites to find harmful ocean debris, and the destruction of coastal wetlands and estuaries, all of which impact human life.

Titles are arranged by Library of Congress classification. For each title the ISSN, starting date, frequency, price, editor, publisher, URL, and target audience are given. Where available, information on whether or not the journal is refereed, and coverage by indexing or abstracting services is included.

New marine science journals were identified in three ways: the author is alerted to new titles by receiving them for cataloging for her library; each pertinent subject section in the 2004 edition of Ulrich’s Periodicals Directory was scanned for titles commencing publication between 1993 and 2003 (biology-zoology, earth sciences, environmental studies and fish and fisheries); websites of Blackwell, Elsevier, Springer, and Taylor and Francis were consulted for new title listings. The titles were either examined in the author’s library or information was gathered from the publishers’ websites. Seven of these new journals are published by Blackwell, and three each by Elsevier, Springer, and Taylor and Francis.
JOURNAL ANNOTATIONS

The first part of each annotation contains bibliographic information, with abbreviations for various elements, as follows:

**Frequency of publication**
- b: bimonthly
- m: monthly
- q: quarterly
- 3/yr.: three times per year

**Target audience**
- Ac: academic
- GP: general public
- HS: high school
- Sp: Specialist

**Abstracts and Indexes, Print and Online**
- ASFA: Aquatic Sciences and Fisheries Abstracts
- BA: Biological Abstracts; BIOSIS
- CABS: Current Awareness in Biological Sciences
- CSA: Cambridge Scientific Abstracts
- ChemAb: Chemical Abstracts; SciFinder Scholar
- EnvAb: Environment Abstracts
- GeoRef: Bibliography and Index of Geology (Online)
- MetGAb: Meteorological and Geoastrophysical Abstracts
- OceanAb: Oceanic Abstracts
Subject terms, which are Library of Congress Subject Headings, are indicated for each entry at the end of the first part of each annotation. It should be noted that the listing of abstracts and indexes for each entry is not exhaustive. Other online sources, not indicated here, such as Elsevier’s ScienceDirect and Blackwell Synergy also include many of these titles. Almost all titles are available either in print or online, and prices are given for each format where available. Because many publishers offer “bundled packages” it is often difficult to determine the price of a given title. The second part of each annotation is descriptive, and indicates the scope and contents of a publication. Its aim is to assist the selector in making choices between similar titles. It will be noted that most journals in this field are intended for a specialized or scientific audience, with only a few directed to the general public. These non-referred titles are Oceanus, Explorations, Jane’s Underwater Technology, San Francisco Estuary and Watershed Science, Two if By Sea.

Natural water chemistry (GB855)

Aquatic Geochemistry. 1380-6165. 1995. q. $374, institutions, either paper or online.

Both paper and online, $448. George W. Luther, ed. Kluwer.


Original studies cover the geochemistry of natural waters and their interactions with underlying rocks and minerals. Papers of an experimental, theoretical, modelling, and
observational nature are included. Recent articles examine surficial Eastern Mediterranean sediments, benthic respiration and inorganic nutrient fluxes in an estuary in Brazil, and geochemistry of a lake in the Canadian Arctic.

**Oceanography (GC1)**


Long articles documenting the results of large-scale international and interdisciplinary projects are published, accompanied by CD-ROMs containing numerical data, images or video. Examples are studies of ocean modelling in the tropical Atlantic and equatorial Pacific as part of the US JGOFS (Joint Global Ocean Flux Study) Synthesis and Modeling Project.


A companion publication to *Limnology and Oceanography*, this online title aims to provide “the most rapid publication consistent with high standards.” Peer review is
online and articles are posted as soon as they are accepted. Studies focus on new 
measurement equipment and techniques for analyzing observations, samples or metadata 
in the aquatic sciences. The online format allows authors to update their published work 
and for discussions to be conducted. Recent articles cover a novel laboratory apparatus 
for simulating oceanic turbulence, automated analysis of oxygen ratios in water samples, 
and design of a mesocosm heating system for climate warming experiments.

Institution. [http://www.oceanusmag.whoi.edu](http://www.oceanusmag.whoi.edu). Target audience: Ac, GP, HS. Subject 
terms: Oceanography, Marine biology.

The online version revives *Oceanus* which was published from 1952 to 2000. With 
emphasis on research conducted at the Woods Hole Oceanographic Institution, Woods 
Hole, Massachusetts, online articles report in a timely manner on ocean exploration, 
ocean research “and the importance of understanding the key feature that makes our 
planet unique and habitable.” Articles are illustrated and written in a popular, but not 
simplified style and readers can be e-mailed when new articles appear. The Deep Ocean 
Exploration Institute at WHOI is the subject of recent articles. Highly recommended for 
collections at all levels.

[http://sio.ucsd.edu/explorations](http://sio.ucsd.edu/explorations). Target audience : Ac, GP, HS. Subject terms:
Oceanography, Marine biology.
Reporting from the Pacific Coast, this publication highlights research and activities at Scripps Institution in La Jolla, California. Biomimicry, infrasound and antibacterial drugs from the ocean are the subject of recent articles. The winter issue is produced on video, and the Scripps annual report is included in the spring edition. Highly recommended for collections at all levels.

**Underwater Exploration (GC65)**


Covering underwater exploration, oceanographic submersibles and ocean engineering applications, this online publication is updated monthly. Acoustic and imaging systems, oceanographic instruments, and navigation and positioning systems are within its scope. The user population for this title is within maritime research companies, the oil and gas exploration industry, military laboratories and off-shore construction companies.

**Estuarine Oceanography (GC96)**


Focusing on the Sacramento-San Joaquin River Delta and the upstream watersheds, this online journal serves as “an electronic forum on science and resource management.”
The results of studies conducted by federal and state agencies, private institutions and universities involved with aquatic science research, monitoring and education in the Bay area are published. This title will be of interest to researchers in any geographic area who encounter the same issues related to estuarine oceanography, estuarine pollution, and tidal wetlands restoration. Articles, long reports, data reviews and data archive documents are planned.

**Ocean-Atmosphere Interaction (GC190)**


Research articles report on the interaction of ocean and atmosphere “or any aspect of the dynamics of physics of either fluid, for the Earth’s weather, climate and climatic stability.” The global measurement of sea surface temperature from space, the implementation of a coupled atmosphere-wave-ocean model in the Mediterranean Sea and the role of wind direction on internal waves on the Iberian shelf are the subjects of recent articles.

**Dynamics of the Ocean (GC201.2)**

Subject terms: Oceanography, Ocean-atmosphere interaction.

Communication between scientists interested in direct observation, analytical, numerical or laboratory models of ocean modelling is facilitated by the online format adopted in 2004. Its broad scope includes ocean-atmosphere interaction as well as all aspects of physical oceanography. Arctic Ocean modelled streamfunction and freshwater comparisons, an ecosystem model for applications to primary productivity and carbon cycle studies in the ocean, and numerical study of the annual fluctuations in the deep equatorial Atlantic Ocean are the subjects of recent articles.

Marine Resources; Applied Oceanography (GC1000)

*Journal of Marine Science and Technology.* 0948-4280 (print); 1437-8213 (online).


Original articles and review papers range from marine engineering, naval architecture and ocean engineering to oceanography and marine environmental science and technology. Recent articles cover the effectiveness of tandem oil fences under currents, the role played by turbulence closures in hull shape optimization, and seaquake response of a floating structure.

*Two If By Sea.* (ISSN not available). 1997. q. Free. Andrea Cohen, Tracy Crago, eds. Massachusetts Institute of Technology and Woods Hole Oceanographic Institution Sea
Marine science journals

Grant Programs. [http://web.mit.edu/seagrant/]. Target audience: GP, HS. Subject terms: Marine resources, Coasts.

Published jointly by the Sea Grant Programs of MIT and the Woods Hole Oceanographic Institution, this readable, illustrated publication features articles on marine resources, fisheries, marine pollution and estuarine oceanography with a focus on the Massachusetts coast. Estuarine salinity, a new high speed boat for law enforcement, oyster culture in Barnstable Bay, and osprey behavior are the subjects of recent articles. News items, a question and answer page, a listing of Sea Grant funded publications, a calendar of events, and a listing of relevant web sites are included.

Marine Pollution (GC1080)


The management of the natural resources of the coastal zone and their implications for social and economic development is the focus of this publication. Emphasis is on the European situation although articles from other parts of the world appear. Geomorphology, physical geography, hydrology, plant and animal ecology, and coastal engineering are within its scope. Recent studies treat public participation in coastal zone environmental impact assessment, assessment of coastal erosion susceptibility in Italy,
evaluating the coastal environment for marine birds, and water quality management in southern England harbors.

**Environmental Sciences (GE1)**


All areas of environmental science are covered, with emphasis on chemical compounds. Engineers, environmental scientists, and public and industrial health personnel are among the audience for this interdisciplinary publication. Original research articles, reviews, news of research and technology, legislation, regulation, and conference announcements and reports are included. Recent marine and freshwater-related articles focus on nutrient dynamics in shallow lakes of northern Greece, the export of persistent organic pollutants to the deep sea, changes in carp blood after exposure to zinc, and estimating erosion in a Louisiana riverine watershed.

**Environmental Quality (GE140)**

This publication aims “to integrate the monitoring and assessment of ecological and environmental indicators with management practices.” Articles explore how research indicators can be applied to management purposes, describe new indicators and their testing and use, and analyze research of resource, system and scale-specific indicators. A benthic community index for streams, the functional trophic height of whiting, relations between introduced fish and environmental conditions at large geographic scales, and natural and anthropogenic factors affecting the macroinvertebrate community in the Santa Cruz River are among the subjects of recent articles.

**Environmental Policy (GE170)**


Focusing on bio-diversity, global warming and climate change this interdisciplinary journal aims “to establish channels of communication between government agencies, professionals, academic experts and policy makers.” Climate change and economic growth, game theoretic analysis of nitrate emission reduction strategies in the Rhine
River basin, and economic valuation of Thai coral reefs are the subjects of recent articles. Conference reports, book reviews and news items also appear.

**Geophysics (QC809)**

*Geofluids.* 1468-8115, print; 1468-8123, online. 2001. q. $481, print and online; $458, online only. Grant Garven, John Parnell, Bruce Yardley, eds. Blackwell.  

Original articles focus on the role of fluids in mineralogical, chemical and structural evolution of the Earth’s crust. Studies of groundwater, terrestrial or submarine geothermal fluids, and metamorphic waters or magmatic fluids are within its scope.

“Authors are encouraged to stress the transdisciplinary relevance of their research.” Recent articles cover massive dolomitization of a Messinian reef in the Great Bahama Bank, overpressure in an Australian sedimentary basin and the origins of salinity in metamorphic fluids.

**Climatic Changes (QC901.C5)**

Indexed: CABS, EMBASE. Refereed. Target audience: Ac, Sp. Subject terms: Climatic changes, Biological diversity conservation.

Seeking “to promote understanding of the interface between all aspects of current environmental change and biological systems,” the journal publishes experimental, observational or theoretical studies on climate change, loss of biodiversity, biological feedback on climate change, and eutrophication. Aquatic, terrestrial, managed or natural environments undergoing any consistent trend in the environment are within its scope.

**Geology (QE1)**


This electronic journal publishes original research articles, review articles, brief data reports and conference and workshop papers dealing with “the interactions between the lithosphere, hydrosphere, atmosphere and biosphere in the context of global issues or global change.” Human components within the Earth system are also studied. Recent marine-related articles focus on the principal physical modes of variability over the tropical Pacific and monitoring North Pacific heat content variability as an indicator of fish quantity.
**Geobiology, Biosphere (QH343.4)**


This relatively new field “explores the relationship between life and the Earth’s physical and chemical environment.” Disciplines in the earth and biological sciences are merged in the fields of microbiology, microbial ecology, paleontology, environmental geology, oceanography, biogeochemistry, and atmospheric sciences. Recent articles focus on the geomicrobiology of deep-sea deposits, recent ecological and biogeochemical changes in alpine lakes of Colorado, and surface chemistry of bacteriogenic iron oxides in the Pacific Ocean.

**Ecology (QH540)**


The management, protection, maintenance and remediation of freshwater, marine and estuarine ecosystems are the subjects of original research articles. Because the
Journal examines “the complex interactions between human society, ecology, economy/development, politics and the environment” it is geared to scientists, engineers, business people, industry and government officials.


Target audience: Ac, Sp. Subject terms: Biotic communities, Ecosystem management.

Both terrestrial and aquatic ecosystems are within the scope of this journal which publishes original articles, mini-reviews and editorials on fundamental ecology, environmental ecology and environmental problem-solving. As an interdisciplinary field, “ecosystem science extends from bounded ecosystems such as watersheds, to spatially complex landscapes, to the Earth itself.” The fields of biogeochemistry, aquatic ecology, and hydrology are included. Recent articles cover the response of coral assemblages to natural temperature variation and rare warm-water events, the effect of nutrient additions to experimental rocky shore communities, and the analysis of four macroalgal assemblages along the Pacific Mexican coast.

**Algae (QK564)**

Encompassing the entire field of algae studies this journal includes research articles primarily by Russian scientists, on algae morphology, anatomy, cytology, reproduction, fossil algae, ecology, conservation, and new algae taxa. It is directed to researchers as well as specialists working in applied fields such as hydrobiology, microbiology, municipal affairs, and fisheries. Conferences and seminar announcements are included.


Focusing on original studies and review articles of harmful microalgae, including cyanobacteria, the journal addresses monitoring, management and control of these organisms. Bloom ecology, factors controlling toxin production, and trophic, socio-economic, public health and aquacultural impacts of bloom events in both marine and fresh water are included. Recent articles report on Hong Kong red tide, paralytic shellfish poisoning toxin profiles in mussels, and cyanobacterial blooms off the Caribbean coast of Puerto Rico.

*Fisheries, Aquaculture (SH1 – SH156)*

Articles on all aspects of aquaculture management including processing, distribution, marketing, modelling, technology transfer, and environmental implications appear in this official journal of the publishing Society. Country and species reviews are also included. An overview of salmon trout aquaculture in Finland, maximizing production efficiency on catfish farms, giant clam and sponge farming in the U.S. affiliated Pacific Islands, and pollution control options for Australian prawn farms are the subjects of recent studies.


The nutrition of all cultivated aquatic animals is covered in reviews and original research papers. Both field and laboratory studies of nutritional biochemistry and physiology are included. Recent articles treat mixed feeding schedules for African catfish, effects of standard soybean meal on Atlantic salmon physiology, dietary lipid sources for seabream and seabass, and development of a pelleted feed for juvenile tropical spiny lobster.

Articles on applied or theoretical research on freshwater, brackish and marine aquaculture are published. All organisms, plant or animal, related to human consumption are within the scope of the journal. Review articles, short communications and book reviews also appear. Recent articles cover the survival rate and growth performance of a carp species in cultivated rice fields, dominant sources of dietary carbon and nitrogen for shrimp, feeds for juvenile tilapia, and handling time and predation behavior by a crab preying on a cultured scallop.

*Fish and Fisheries.* 1467-2960, print; 1467-2979, online. 2000. q. $582, print and online; $553, online only. Tony Pitcher and Paul Hart, eds. Blackwell. 

The journal focuses on fish biology, conservation and exploitation and is intended “to establish a forum for debate of issues of global concern in world fisheries.” An interdisciplinary approach draws on the fields of molecular biology, genetics, biochemistry, physiology, ecology, conservation and population dynamics. Taste preference in fishes, stock fluctuation in Arctic cod related to long-term environmental changes, ecosystem-based fisheries management, and activity and energetics of free-swimming fish are the subjects of recent articles.


The management, ecology, and conservation of inland, estuarine and coastal fisheries are within the scope of this journal. Studies focus on the development and management of beneficial conditions for fish, as well as the conservation and enhancement of their habitat. Recent articles cover the characteristics and rehabilitation of the spawning habitats of the sea trout in the Baltic, the diversity and abundance of fish communities in Brazilian lagoons, and marine fish life history strategies and their applications to fishery management.

Marine Mineral Resources (TN264)


Intended for scientists and engineers in industry and academic institutions, the journal covers the management and utilization of seafloor sediments and rocks. Topics include marine minerals exploration and recovery, mooring systems and engineering structures. Articles on the study of acoustical, biological, chemical, mechanical, and physical properties affecting the geological system of the seafloor are within its scope.
Deep-sea polymetallic nodule mining, a code of practice for ocean mining, marine clays in east Asia, and ferromanganese nodules in the Indian Ocean are the subjects of recent studies.

**Marine Biotechnology (TP248.27 M37)**


Articles in this journal include studies in molecular biology, genetics, cell biology and biogeochemistry of marine and freshwater unicellular microorganisms. New molecular techniques for the study and manipulation of these organisms, and research pertaining to aquaculture and mariculture are included. Recent articles cover sharks as a source of anti-tumor treatments, a carrageenan gel as an agent to sequester paralytic shellfish poison, the isolation of an antifouling substance from a marine sponge, and initiation of cartilage cell culture from skate.
CONCLUSION

The thirty journals in the marine sciences that have commenced publication since 1993 attest to the interdisciplinary nature of this field. Ranging from geochemistry to marine biotechnology, they report on basic and applied research in a variety of subject areas. The above listing is intended to assist in collection development in undergraduate, research level and specialized collections. Non-refereed titles are included because they may be useful to some patrons.

The author welcomes suggestions of new titles to be included in future updates.
REFERENCES
