

CAMBRIDGE

JOURNALS

Environmental Conservation

International Journal of Interdisciplinary Environmental Science

Published for the Foundation for Environmental Conservation

Editor

Nicholas V. C. Polunin, University of Newcastle, UK

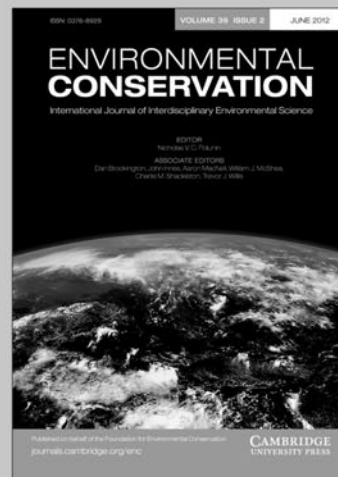
Environmental Conservation is one of the longest-standing, most highly-cited of the interdisciplinary environmental science journals. It includes research papers, reports, comments, subject reviews, and book reviews addressing environmental policy, practice, and natural and social science of environmental concern at the global level, informed by rigorous local level case studies. The journal's scope is very broad, including issues in human institutions, ecosystem change, resource utilisation, terrestrial biomes, aquatic systems, and coastal and land use management. *Environmental Conservation* is essential reading for all environmentalists, managers, consultants, agency workers and scientists wishing to keep abreast of current developments in environmental science. Selected papers are made freely available online as part of **EC Perspectives**.

Price information

is available at: <http://journals.cambridge.org/enc>

Free email alerts

Keep up-to-date with new material – sign up at
<http://journals.cambridge.org/enc-alerts>



Environmental Conservation is available online at:
<http://journals.cambridge.org/enc>

To subscribe contact Customer Services

in Cambridge:

Phone +44 (0)1223 326070

Fax +44 (0)1223 325150

Email journals@cambridge.org

in New York:

Phone +1 (845) 353 7500

Fax +1 (845) 353 4141

Email

subscriptions_newyork@cambridge.org

For free online content visit:
<http://journals.cambridge.org/enc>



CAMBRIDGE
UNIVERSITY PRESS

THE MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM

TERMS OF MEMBERSHIP FOR 2013

Annual members, receiving the Journal – online only, per annum	£55.00*
Annual members, receiving the Journal – print only, per annum	£95.00*
Annual members, receiving the Journal – print and online, per annum	£115.00*
Annual members, without the Journal, per annum	£35.00*
Corporate members, receiving the Journal – online only, per annum	£360.00
Corporate members, receiving the Journal – print and online, per annum	£425.00
Student members, with the Journal – online only, per annum (non-voting)	£30.00
Student members, with the Journal – print only, per annum (non-voting)	£45.00
Student members, without the Journal, per annum (non-voting)	£20.00

The Association is a registered charity and was founded in 1884 to promote accurate researches leading to the advancement of zoological and botanical science and to increase our knowledge of the food, life, conditions and habits of British fish. The work of the Association is controlled by the Council elected annually by its subscribing members.

The Marine Biological Association, under the direction of its Council, has undertaken research in all branches of marine science and many of the results have been published in this Journal. An account of the history of the first hundred years of the Association and Journal may be found in Volume 67 (pp. 463 and 465). Summaries of the activities and research of the Association are given annually in the Report of the Council, sent to members in April, and to other subscribers with a later issue of the *JMBA*.

Since its foundation the Association has been supported by grants from Research Councils and by subscriptions and donations from private members, universities, learned societies, the Fishmongers' Company and other public bodies.

The Plymouth Laboratory was opened in June 1888 and, since that date, considerable additions have been made to the buildings, including a library, resource centre, extensive laboratory accommodation and seawater facilities.

In 1988 an agreement was reached between the MBA Council and the Natural Environment Research Council (NERC) to merge a large part of the Plymouth Laboratory with the NERC's Institute for Marine Science which had been in Plymouth since 1971. This new institute was called the Plymouth Marine Laboratory (PML) based at both Citadel Hill and West Hoe sites. In 2001 the MBA and PML re-established separate identities funded by Grants-in-aid from NERC. The Association and the research programme are

based entirely at the Citadel Hill Laboratory. The building is shared with SAHFOS (Sir Alister Hardy Foundation for Ocean Science).

The Marine Biological Association retains the lease of the building on Citadel Hill and continues as a very active scientific learned society with a large international membership. The MBA manages a research programme carried out by research fellows (partly funded by NERC) together with scientific visitors, publishes an International Journal, Annual Report, Newsletters and organizes scientific meetings.

Subscriptions can be paid by cash/cheque, direct debit from a UK bank account or credit card. *Subscriptions are reduced by £5 per annum if paying by direct debit.

Members of the Association have the following rights and privileges: they elect the Officers and Council annually; they are entitled to receive the Journal of the Association at the members' rate; they receive the biannual Newsletter; they have the option to apply to the Director for research facilities at the laboratory; and they have access to the resources in the library at Plymouth during working hours. Corporate members have significant additional rights and privileges, details of which can be supplied on request. Student members do not have voting rights. The Commissioners of Inland Revenue have approved the Association for the purposes of Section 16, Finance Act, 1958, and that the whole of the annual subscriptions paid by a member who qualifies for relief under the section will be allowable as a deduction from his emoluments assessable to income tax.

All correspondence should be addressed to: The Membership Secretary, Marine Biological Association, The Laboratory, Citadel Hill, Plymouth, PL1 2PB, UK (Tel: +44 (0) 1752 633207; Fax: +44 (0) 1752 633102; e-mail: membership@mba.ac.uk).

PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE
The Pitt Building, Trumpington Street, Cambridge, CB2 1RP, United Kingdom

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Cambridge, CB2 2RU, United Kingdom
32 Avenue of the Americas, New York, NY 10013-2473, USA
477 Williamstown Road, Port Melbourne, VIC 3207, Australia
C/ Orense, 4, planta 13, 28020, Madrid, Spain
Dock House, The Waterfront, Cape Town 8001, South Africa

CONTENTS

BURGOS-LEÓN, A.M., VALDÉS, D., VEGA, M.A. & DEFEO, O. Spatial structuring of submerged aquatic vegetation in an estuarine habitat of the Gulf of Mexico	855
RODRIGUES, F.L. & VIEIRA, J.P. Surf zone fish abundance and diversity at two sandy beaches separated by long rocky jetties	867
BHATTACHARJEE, D., CHOUDHURY, B.C., SIVAKUMAR, K., SHARMA, C., JOHN, S., BEHERA, S., BEHERA S. & BHADURY, P. Benthic foraminifera assemblages in turtle congregation sites along the north-east coast of India	877
PADUA, A., LANNA, E. & KLAUTAU, M. Macrofauna inhabiting the sponge <i>Paraleucilla magna</i> (Porifera: Calcarea) in Rio de Janeiro, Brazil	889
STEPHENS, K.M.M., GALVIN, J., LAWLESS, A. & MCCORMACK, G.P. Reproductive cycle and larval characteristics of the sponge <i>Haliclona indistincta</i> (Porifera: Demospongiae)	899
BETTAREL, Y., THUY, N.T., HUY, T.Q., HOANG, P.K. & BOUVIER, T. Observation of virus-like particles in thin sections of the bleaching scleractinian coral <i>Acropora cytherea</i>	909
BAPTISTA, M., MAULVAULT, A.L., TRÜBENBACH, K., NARCISO, L., MARQUES, A. & ROSA, R. Amino acids in the octocoral <i>Veretillum cynomorium</i> : the effect of seasonality and differences from scleractinian hexacorals	913
RIASCOS, J.M., VILLEGAS, V., CÁCERES, I., GONZÁLEZ, J.E. & PACHECO, A.S. Patterns of a novel association between the scyphomedusa <i>Chrysaora plocamia</i> and the parasitic anemone <i>Peachia chilensis</i>	919
RUSSO, V.L., VILLARES, G., MARTELLI, A., DE WARD, C.T.P. & HARGUINTEGUY, C. New species of <i>Epacanthion</i> (Nematoda: Thoracostomopsidae) from Patagonia coast, Río Negro and Chubut, Argentina	925
MILJUTINA, M.A., MILJUTIN, D.M. & TCHESUNOV, A.V. Seven <i>Acantholaimus</i> (Chromadoridae: Nematoda) species from one deep-sea sediment sample (Angola Basin, south-east Atlantic)	935
FUJIMOTO, S., MIYAZAKI, K. & SUZUKI, A.C. A new marine tardigrade, <i>Tanarctus diplocerus</i> (Arthrotardigrada: Halechiniscidae) from Japan	955
FUKUDA, M.V. & NOGUEIRA, J.M.D.M. On a new species of <i>Nuchalosyllis</i> (Polychaeta: Syllidae), a rare syllid genus only known from Brazilian waters	963
BOCHERT, R. & ZETTLER, M.L. A record of the genus <i>Trochochaeta</i> (Polychaeta) in the southern hemisphere with description of a new species	967
MATTOS, G., CARDOSO, R.S. & SANTOS, A.S.D. Environmental effects on the structure of polychaete feeding guilds on the beaches of Sepetiba Bay, south-eastern Brazil	973
RUPIT-ARTEAGA, S.K., HERNÁNDEZ-ALCÁNTARA, P. & SOLÍS-WEISS, V. Description of <i>Mooreonuphis bidentata</i> a new species of Onuphidae (Annelida: Polychaeta) from the Mexican Caribbean with remarks on the distribution of the genus	981
WINFIELD, I., ORTIZ, M. & HENDRICKX, M.E. A new deep-water species of <i>Epimeria</i> (Amphipoda: Gammaridea: Epimeriidae) from the continental slope of western Mexico	991
SEPAHVAND, V., SARI, A., SALEHI, H., NABAVI, S.-M.-B. & GHORBANZADEH, S.-G. Littoral mud shrimps (Decapoda: Gebiidea & Axiidea) of the Persian Gulf and Gulf of Oman, Iran	999
YOSHINO, K., KATANO, T., HAYAMI, Y., HAMADA, T. & KOBAYASHI, G. Morphological variation of pallial organs at sites of differing turbidity: a case study of an arcid bivalve	1009
NYE, V., COPLEY, J., LINSE, K. & PLOUWIEZ, S. <i>Itheyaspira bathycodon</i> new species (Vetigastropoda: Trochoidea: Turbinidae: Skeneinae) from the Von Damm Vent Field, Mid-Cayman Spreading Centre, Caribbean	1017
CHAPPERON, C. & SEURONT, L. Temporal shifts in motion behaviour and habitat use in an intertidal gastropod	1025
MOLINA, W.F., FILHO, P.A.D.L., FERNANDES, V., DANTAS, R., MOTTA-NETO, C.C.D. & BERTOLLO, L.A.C. Morphological differences associated with colour morphs of the auger snail <i>Hastula cinerea</i> (Conoidea: Terebridae) from north-east Brazil	1035
MATSUDA, H., HAMANO, T. & NAGASAWA, K. Growth and reproductive cycle of <i>Hypermastus tokunagai</i> (Caenogastropoda: Eulimidae), an ectoparasite of the sand dollar <i>Scaphechinus mirabilis</i> (Clypeasteroidea: Scutellidae) in the Seto Inland Sea, Japan	1041
HIDAKA, H., WATANABE, H., KANO, Y. & KOJIMA, S. Mitochondrial genome rearrangement in a hydrothermal vent-endemic lineage of provannid gastropods provides a new DNA marker for phylogeographical studies	1053
MODICA, M.V., MARIOTTINI, P., PRAKIC, J. & OLIVERIO, M. DNA-barcoding of sympatric species of ectoparasitic gastropods of the genus <i>Cerithiopsis</i> (Mollusca: Gastropoda: Cerithiopsidae) from Croatia	1059
THORNE, B.V., ERIKSSON, H. & BYRNE, M. Long term trends in population dynamics and reproduction in <i>Holothuria atra</i> (Aspidochirotida) in the southern Great Barrier Reef; the importance of asexual and sexual reproduction	1067
JOLY-TURQUIN, G., DUBOIS, P., LEYZOUR, S., PERNET, P., RIDDER, F.D., PINTELON, R. & GUILLON, M. Contrasting relationships between pyloric caecum and gonad growth in the starfish <i>Asterias rubens</i> : combined field and experimental approaches	1073
MICAEL, J., ALVES, M.J. & COSTA, A.C. The population dynamics of <i>Ophidiaster ophidianus</i> (Echinodermata: Asteroidea) in the Azores, at the north-western periphery of its distribution	1087
HERNÁNDEZ-AGUILAR, S.B., ABITIA-CÁRDENAS, L.A., MORENO-SÁNCHEZ, X.G., ARELLANO-MARTÍNEZ, M. & GONZÁLEZ-RODRÍGUEZ, E. Trophic spectrum of the sailfish <i>Istiophorus platypterus</i> caught off Acapulco in the southern Mexican Pacific	1097
PORCU, C., FOLLESA, M.C., GASTONI, A., MULAS, A., PEDONI, C. & CAU, A. The reproductive cycle of a deep-sea eel, <i>Nettastoma melanurum</i> (Nettastomatidae: Anguilliformes) from the south-eastern Sardinian Sea (central-western Mediterranean)	1105
BELLINI, C., SANTOS, A.J.B., GROSSMAN, A., MARCOVALDI, M.A. & BARATA, P.C.R. Green turtle (<i>Chelonia mydas</i>) nesting on Atol das Rocas, north-eastern Brazil, 1990–2008	1117
REVUELTA, O., LEÓN, Y.M., AZNAR, F.J., RAGA, J.A. & TOMÁS, J. Running against time: conservation of the remaining hawksbill turtle (<i>Eretmochelys imbricata</i>) nesting population in the Dominican Republic	1133

ERRATUM

LONGSHAW, M. & MALHAM, S.K. A review of the infectious agents, parasites, pathogens and commensals of European cockles (<i>Cerastoderma edule</i> and <i>C. glaucum</i>)—	
ERRATUM	1141