

Cambridge Core

The new
home of
academic
content

[cambridge.org/core](https://www.cambridge.org/core)

Cambridge **Core**



CAMBRIDGE
UNIVERSITY PRESS

THE MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM

TERMS OF MEMBERSHIP FOR 2019

MBA MEMBERSHIP (prices per annum)	Price from 1st March 2019
Young Marine Biologist (YMB)	£12.50
Student Member	£25.00
Associate Member	£40.00 (direct debit discount £5)
Professional Member, Mem.MBA	£45.00 (direct debit discount £5)
MBA Fellow, FMBA	£120.00 (direct debit discount £5)
Institutional Member	£340.00

JOURNAL SUBSCRIPTION (MBA price added to the above membership fees, with the exception of YMB as no Journal option for this category)	
Online Journal	£20.00
Print & Online Journal	£80.00

The Association is a learned society founded in 1884 and incorporated by Royal Charter in 2013. The Marine Biological Association (MBA) provides a unified, clear, independent voice on behalf of the marine biological community. In 1888, the MBA opened the Plymouth laboratory at Citadel Hill.

The MBA is also a registered charity with its key aims being to promote scientific research into all aspects of life in the sea, including the environment on which it depends, and to disseminate to the public the knowledge gained. The Patron of the Association is His Royal Highness the Duke of Edinburgh, who is also an Honorary Fellow. The other Honorary Fellows are His Serene Highness Prince Albert of Monaco, Dr Sylvia Earle, Sir Tim Hunt and Professor James Lovelock.

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).

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 Marine Biological Association is a very active scientific learned society with a large international membership. The MBA also manages an internationally renowned research programme.

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 a wide range of rights and privileges including the use of post-nominals (FMBA for MBA Fellows, Mem.MBA for Professional Members) and being entitled to receive The Marine Biologist Magazine. 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 426493; 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.

Printed by Bell and Bain Limited, Glasgow

CAMBRIDGE UNIVERSITY PRESS

Journals Fulfillment Department, UPH, Shaftesbury Road, Cambridge CB2 8BS, United Kingdom
1 Liberty Plaza, Floor 20, New York, NY 10006, 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

ARTICLES

Mills, K. and Mortimer, K. Observations on the tubicolous annelid <i>Magelona alleni</i> (Magelonidae), with discussions on the relationship between morphology and behaviour of European magelonids	715
Walls, A.M., Edwards, M.D., Firth, L.B. and Johnson, M.P. Ecological priming of artificial aquaculture structures: kelp farms as an example	729
Siddik, A.A., Al-Sofyani, A.A., Ba-Akdah, M.A. and Satheesh, S. Invertebrate recruitment on artificial substrates in the Red Sea: role of substrate type and orientation	741
Santos, T.M.T. and Aviz, D. Macrobenthic fauna associated with <i>Diopatra cuprea</i> (Onuphidae: Polychaeta) tubes on a macrotidal sandy beach of the Brazilian Amazon Coast	751
Relles, N.J., Patterson, M.R. and Jones, D.O.B. Change detection in a Marine Protected Area (MPA) over three decades on Bonaire, Dutch Caribbean	761
Bell, J.J., Jompa, J., Haris, A., Werorilangi, S., Shaffer, M. and Mortimer, C. Domination of mesophotic ecosystems in the Wakatobi Marine National Park (Indonesia) by sponges, soft corals and other non-hard coral species	771
Keklikoglou, K., Chatzigeorgiou, G., Faulwetter, S., Kalogeropoulou, V., Plaiti, W., Maidanou, M., Dounas, C., Lampadariou, N. and Arvanitidis, C. 'Simple' can be good, too: testing three hard bottom sampling methods on macrobenthic and meiobenthic assemblages	777
Nogueira Júnior, M., Giachini Tosetto, E. and Razzolini, E.L. The influence of environmental conditions on <i>Parasagitta friderici</i> (Chaetognatha) abundance in a subtropical estuary (south Brazil)	785
Nava, H., García-Madrigal, C.A.E. and Carballo, J.L. Relationships between boring sponge assemblages and the availability of dead coral substrate on Mexican Pacific coral reefs	795
Sijà, C., Maldonado, M., Farias, C. and Rueda, J.L. Deep-water sponge fauna from the mud volcanoes of the Gulf of Cadiz (North Atlantic, Spain)	807
Bakhmet, I.N., Sazhin, A., Maximovich, N. and Ekimov, D. <i>In situ</i> long-term monitoring of cardiac activity of two bivalve species from the White Sea, the blue mussel <i>Mytilus edulis</i> and horse mussel <i>Modiolus modiolus</i>	833
Sousa, R., Vasconcelos, J., Delgado, J., Riera, R., González, J.A., Freitas, M. and Henriques, P. Filling biological information gaps of the marine topshell <i>Phorcus sauciatus</i> (Gastropoda: Trochidae) to ensure its sustainable exploitation	841
Youssef, F., Tlig Zouari, S. and Benmansour, B. New host–parasite records of siphonostomatoid copepods infesting elasmobranch fishes in Tunisian waters	851
Štrus, J., Tušek-Žnidarič, M., Repnik, U., Blejec, A. and Summers, A. Microscopy of crustacean cuticle: formation of a flexible extracellular matrix in moulting sea slaters <i>Ligia pallasii</i>	857
Miazaki, L.F., Simões, S.M., Castilho, A.L. and Costa, R.C. Population dynamics of the crab <i>Hepatus pudibundus</i> (Herbst, 1785) (Decapoda, Aethridae) on the southern coast of São Paulo state, Brazil	867
McKeown N.J., Watson, H.V., Coscia, I., Wootton, E. and Ironside, J.E. Genetic variation in Irish Sea brown crab (<i>Cancer pagurus</i> L.): implications for local and regional management	879
Cores, C., Gaspar, M.B. and Erzini, K. Estimating the density of Pennant's swimming crab, <i>Portunus latipes</i> (Pennant, 1777) in the swash zone using baited stakes and area of attraction	887
Hui, M., Shi, G., Sha, Z. Liu, Y. and Cui, Z. Genetic population structure in the swimming crab, <i>Portunus trituberculatus</i> and its implications for fishery management	891
Yasuda C.I., Takiya, Y., Otoda, M., Nakano, R. and Koga, T. Is the seasonal change of sexual differences in shell use by the hermit crab <i>Pagurus minutus</i> considered to be driven by growth or reproduction?	901
Dehghani, A., Sari, A. and Naderloo, R. Three new species of narrowly endemic snapping shrimp, genus <i>Alpheus</i> (Decapoda: Caridea: Alpheidae) from the Persian Gulf	911
Dehghani, A., Sari, A. and Naderloo, R. Three new species of narrowly endemic snapping shrimp, genus <i>Alpheus</i> (Decapoda: Caridea: Alpheidae) from the Persian Gulf – CORRIGENDUM	921
Ruas, V.M., Rufener, M.-C. and D'Incao, F. Distribution and abundance of post-larvae and juvenile pink shrimp <i>Farfantepenaeus paulensis</i> (Pérez Farfante, 1967) in a subtropical estuary	923
Gallagher, J., Finarelli, J.A., Jonasson, J.P. and Carlsson, J. Mitochondrial D-loop DNA analyses of Norway lobster (<i>Nephrops norvegicus</i>) reveals genetic isolation between Atlantic and East Mediterranean populations	933
Sallami, B., Ben Ibrahim, A., Ben Salem, M. and Chakroun-Marzouk, N. Meristic, morphometric and biological characteristics of the common moray eel (<i>Muraena helena</i>) in northern Tunisia	941
Santos, J.N.S., Gomes-Gonçalves, R.S., Silva, M.A., Vasconcellos, R.M. and Araújo, F.G. Morphological divergence in the anchovy <i>Anchoa januaria</i> (Actinopterygii, Engraulidae) between tropical and subtropical estuarine areas on the Brazilian coast	947
Techetach, M., Ajana, R. and Saoud, Y. Reproductive parameters of Atlantic chub mackerel <i>Scomber colias</i> in M'diq Bay, Morocco	957
Moyano, G., Cerna, F., Ojeda, V. and Plaza, G. Validation of the first annulus and growth model fit for the cardinalfish (<i>Epigonus crassicaudus</i>)	963
Landaeta M.F., Nowajewski, V. Paredes, L.D. and Bustos, C.A. Early life history traits of the blenny <i>Auchenionchus crinitus</i> (Teleostei: Labrisomidae) off northern Chile	969
Khalifa, F., Hadj Taieb, A., Hajji, F., Ayadi, H. and Jarboui, O. Reproductive biology of the Egyptian sole, <i>Solea aegyptiaca</i> (Actinopterygii: Pleuronectiformes: Soleidae), in southern Tunisian waters (Central Mediterranean)	975
Temperoni, B., Massa, A. and Viñas, M.D. Fatty acids composition as an indicator of food intake in <i>Merluccius hubbsi</i> larvae	983
Hossain, M.A., Al-Abdul-Elah, K. and Yaseen, S.B. Seasonal variations in proximate and fatty acid composition of sobaity sea bream (<i>Sparidintex hasta</i>) in Kuwait waters	991
Lim, K.C., Chong, V.C., Lim, P.-E., Yurimoto, T. and Loh, K.H. Feeding ecology of three sympatric species of stingrays on a tropical mudflat	999
Akkaya Baş, A., Öztürk, B. and Amaha Öztürk, A. Encounter rate, residency pattern and site fidelity of bottlenose dolphins (<i>Tursiops truncatus</i>) within the Istanbul Strait, Turkey	1009
Affinito, F., Olaya Meza, C., Akkaya Bas, A., Brill, D., Whittaker, G. and Capel, L. On the behaviour of an under-studied population of bottlenose dolphins in the Southern Adriatic Sea	1017

Cambridge Core

For further information about this journal please go to the journal web site at:
cambridge.org/mbi



MIX
 Paper from
 responsible sources
 FSC® C007785

CAMBRIDGE
 UNIVERSITY PRESS