LIVRO DE RESUMOS

IV CONGRESSO DA ORDEM DOS BIÓLOGOS

&

II CONGRESSO DOS BIÓLOGOS DOS AÇORES

13 A 15 DE OUTUBRO DE 2011

AULA MAGNA DA UNIVERSIDADE DOS AÇORES, PONTA DELGADA

ORDEM DOS BIÓLOGOS

Título
Livro de Resumos – IV Congresso Ordem dos Biólogos/II Congresso dos Biólogos dos Açores – A Biologia no Século 21

Autores
Ávila, S.P., R. Martins, R. Cordeiro, A. Cunha, C. Fonseca, M. Raposo, V. Gouveia, D. Toubarro, J. Martins & O. Moreira, 2011. *Livro de Resumos IV Congresso da Ordem dos Biólogos/ II Congresso dos Biólogos dos Açores - A Biologia no Século 21*. Ordem dos Biólogos, Ponta Delgada.

Edição
Publiçor – Publicações e Publicidade, Lda.
Rua da Praia dos Santos nº 10 - S. Roque
9500-706 Ponta Delgada
Telefone 296 630 080 | Fax 296 630 089
E-mail: publicor@publicor.pt | www.publicor.pt

Empresa com Sistema de Gestão da Qualidade
Certificado ISO 9001:2008

Paginação, impressão e acabamentos
Nova Gráfica, Lda.

Depósito Legal
334725/11

Impresso nos Açores em papel isento de cloro (ECF)

Impressão CARBONFREE*
Foram neutralizados pela Nova Gráfica, aprox. 17,88 kg CO_{2eq}

EXPLOITATION OF KEYSTONE SPECIES: POPULATION AND COMMUNITY-LEVEL EFFECTS

MARTINS, G.M. [1,2,*], THOMPSON, R.C.[3], HAWKINS, S.J.[4,5], NETO, A.I.[1,2] & S.R. JENKINS [4,5]

[1] Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), 4050-123 Porto, Portugal

[2] Grupo de Biologia Marinha e CIRN, University of Azores, 9501-801 Ponta Delgada, Portugal

[3] Marine Biology and Ecology Research Centre, School of Marine Science and Engineering, University of Plymouth, PL4 8AA Plymouth, UK

[4] School of Ocean and Earth Science, University of Southampton, SO14 3ZH Southampton, UK

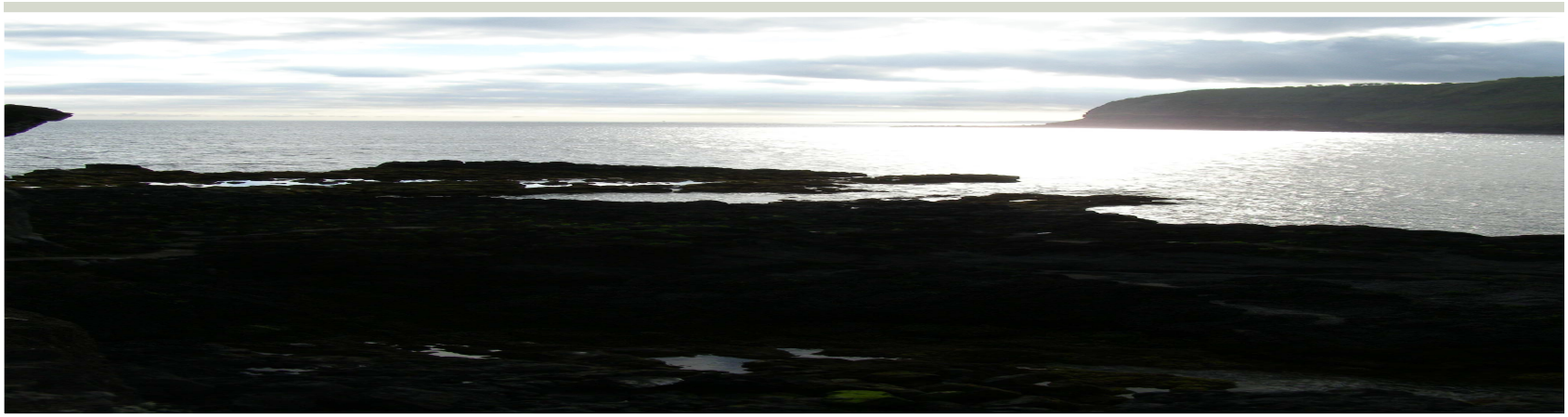
[5] Marine Biological Association, PL1 2PB Plymouth, UK

[6] School of Ocean Sciences, Bangor University, LL59 5AB Anglesey, UK

[*] E-mail: gmartins@uac.pt

Experimental work has shown the importance of grazing by patellid limpets in structuring intertidal assemblages suggesting that limpet over-exploitation would result in dramatic changes to the structure and functioning of intertidal ecosystems. Arguably, the largest anthropogenic impact on Azorean shores has been the over-exploitation of limpets but little is known about the effects of such large-scale and chronic impact. Here, we provide a general overview of studies done over a 3-year period. Generally, patterns of limpet distribution were variable at different spatial scales. At the larger spatial scale, inter-island variation in harvesting intensity affected the abundance and size structure of limpet populations as well as the balance between grazers, algae and barnacles. Stocks of limpets showed clear signs of over-exploitation and there was evidence that current legislation, including limpet protected zones, have been largely ineffective in protecting these populations. Experimental work showed that current dominance by algal turfs at mid shore levels is not a stable state and is result of chronic limpet removal. Hence, cessation of limpet harvesting should allow a return to the pre-exploited community structure. At smaller spatial scales, substratum microtopography affected limpet distribution and here we show how the experimental provision of microhabitats could be used as a measure to mitigate the effects of coastal urbanisation while enhancing the stocks of exploited species.

Keywords: Patellid limpets, harvesting, rocky intertidal, ecological interactions, management and conservation.



Exploitation of keystone species

Population and community-level effects

Gustavo M. Martins*

Richard C. Thompson

Stephen J. Hawkins

Ana I. Neto

Stuart R. Jenkins

Ponta Delgada, IV Congresso Ordem Biólogos
2011