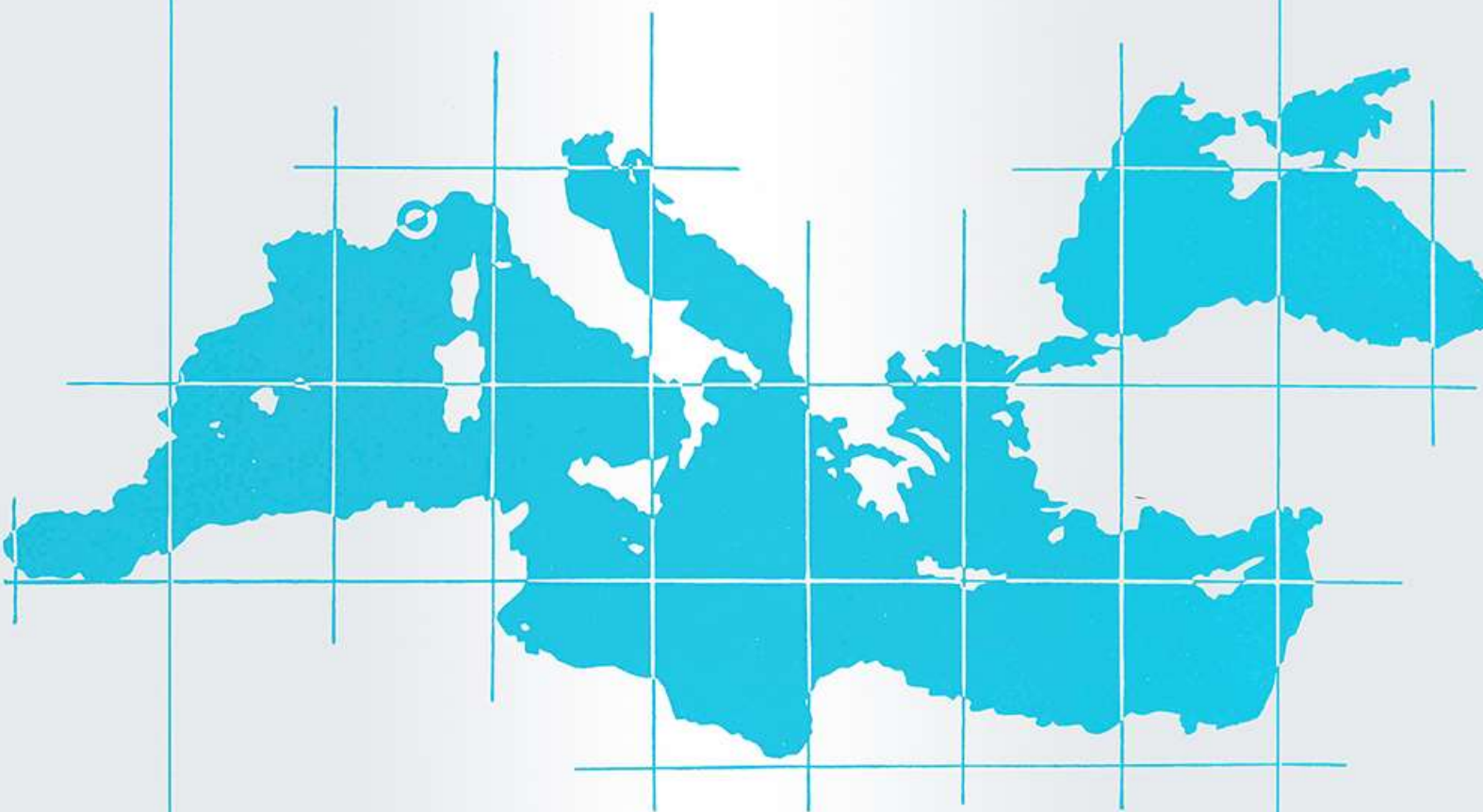


COMMISSION INTERNATIONALE  
POUR L'EXPLORATION SCIENTIFIQUE  
DE LA MER MEDITERRANEE



**RAPPORT DU 41<sup>e</sup> CONGRES  
DE LA CIESM**

*41<sup>st</sup> CIESM CONGRESS PROCEEDINGS*

Kiel (Allemagne)

2016

Volume 41

---

*Ce volume rassemble sous la forme d'articles synthétiques toutes les communications scientifiques présentées lors du 41ème Congrès de la CIESM. Cet ensemble qui regroupe les articles de centaines de chercheurs ainsi que les synthèses des modérateurs des nombreuses sessions tenues à Kiel en septembre 2016, offre un vaste panorama, très représentatif des recherches marines menées actuellement en Méditerranée et en mer Noire.*

*Les articles présentés dans le cadre des six comités scientifiques sont édités sous la responsabilité du Président de comité concerné. Seules les communications physiquement présentées à Kiel par leur auteur ont été retenues pour cette publication. Pour leur part, les rapports des modérateurs des sessions ont été édités par mes soins.*

*Frédéric Briand  
Directeur Général, CIESM*

### **Editeurs scientifiques**

Les Présidents des comités scientifiques de la CIESM, 2013-2016  
Silvia Ceramicola (Géosciences marines),  
Miroslav Gačić (Physique et climat de l'océan),  
François Galgani (Biogéochimie marine),  
Frank Oliver Glöckner (Microbiologie et biotechnologie marines),  
Jamila Ben Souissi, Salud Deudero and Tamara Shiganova (Ecosystèmes marins et ressources vivantes),  
Yves Henocque (Systèmes côtiers)

### **Réalisation**

Kaveh Rassoulzadegan, Paula Moschella, Céline Barrier

Références bibliographiques  
*Rapp. Comm. int. Mer Médit.*, 41

Format de citation :

Jimenez C., Petrou A., Andreou V., Hadjioannou L., Wolf W., Koutsoloukas N. and Abu Alhaija R. 2016. Veni, vidi, vici: the successful establishment of the lionfish *Pterois miles* in Cyprus (Levantine sea). *Rapp. Comm. int. Mer Médit.*, 41 : 417.



### **CIESM**

The Mediterranean Science Commission – Monaco  
[www.ciesm.org](http://www.ciesm.org)

---

## Table des Matières

<b>COMITÉ 1 - Géosciences marines</b> .....	<b>7</b>
Marine Tectonics, Geodynamics .....	9
Underwater archaeology .....	17
Shelf and slope dynamics .....	23
Cold seeps and gas hydrates .....	29
Metal distribution in sediments .....	33
Marine geo-hazards .....	39
High-Resolution seabed mapping .....	45
Paleoceanography .....	51
<b>COMITÉ 2 - Physique et climat de l'océan</b> .....	<b>61</b>
Coastal / open-sea exchanges .....	63
Open ocean processes .....	71
Open ocean processes in the Mediterranean and Black seas .....	81
Basin-wide variability .....	91
Sub-basin & mesoscale variability .....	97
Sea level variations .....	105
Observing systems .....	113
Variability of thermohaline properties I .....	119
Variability of thermohaline properties II .....	127
Oceanographic networks .....	135
<b>COMITÉ 3 - Biogéochimie marine</b> .....	<b>145</b>
Transitional waters .....	147
Sources of pollution / fluxes .....	155
Sources of pollution / processes .....	163
Atmospheric chemical pollutants .....	171

Environmental and pollution monitoring .....	177
Ecotoxicology / experimental .....	185
Ecotoxicology / field studies .....	195
Seabed contamination .....	203
Large scale biogeochemical cycles .....	209
Bioaccumulation and trophic transfer / pelagic .....	217
Marine litter, microplastics .....	227
Bioaccumulation and trophic transfer / benthic .....	237
Bioaccumulation - monitoring assessment .....	247

#### **COMITÉ 4 - Microbiologie et Biotechnologie marines ..... 255**

Microbial diversity .....	257
Microbial diversity and symbioses .....	265
Phytoplankton I .....	273
Phytoplankton II .....	279
Harmful Algal Blooms (HABs) .....	287
Megasequencing projects .....	293
Microbial techniques and applications .....	301
Blue Biotech (marine invertebrates and extremophile microbes) .....	307

#### **COMITÉ 5 - Ressources vivantes et écosystèmes marins ..... 315**

Cartilaginous fish I .....	317
Cartilaginous fish II .....	323
Fish biology / early stages .....	329
Fish biology / adults .....	333
Rocky shore ecology .....	345
Seaweeds and seagrasses .....	353
Biodiversity / global warming impact .....	361
Biodiversity / fishing impact .....	371
Assessing fish populations .....	377

Fisheries ecology .....	385
Feeding ecology and physiology .....	391
Food webs and trophic dynamics .....	397
Food web modelling .....	405
Alien records .....	411
Biogeography of aliens .....	419
Exotic species - fluxes and vectors across seas .....	425
Aliens biology and adaptations .....	433
Genetic markers of biodiversity .....	439
Indicators and tools for biodiversity conservation .....	445
Soft-bottom ecology .....	453
Deep sea ecology .....	461
Key coastal habitats .....	469
Marine artificial habitats .....	475
Zooplankton I .....	481
Zooplankton II , including gelatinous plankton .....	489
Vertebrates under threat .....	495
Endangered invertebrates .....	501

**COMITÉ 6 - Ecosystèmes côtiers ..... 507**

Valuation of marine ecosystems / green tourism .....	509
Fishery and aquaculture issues .....	515
Ocean policies - local implementation .....	525
Coastal pollution hotspots .....	531
Coastal observation tools .....	537
Cumulative impacts of stressors .....	541
Transboundary conservation actions .....	547
Local Ecological Knowledge .....	553

## PRELIMINARY DATA ON INVERTEBRATES ASSOCIATED TO *CYSTOSEIRA* COMMUNITIES FROM THE MEDITERRANEAN SEA

R. Sanfilippo <sup>1\*</sup>, A. Rosso <sup>2</sup>, F. Sciuto <sup>1</sup>, D. Serio <sup>1</sup>, M. Catra <sup>1</sup> and G. Alongi <sup>1</sup>

<sup>1</sup> Department of Biological, Geological and Environmental Sciences, Catania University, Italy - sanfros@unict.it

<sup>2</sup> Catania University Department of Biological, Geological and Environmental Sciences

### Abstract

The present paper aims to provide first information about invertebrates (bryozoans, serpulids, spirorbids, ostracods and foraminifers) associated to selected *Cystoseira* communities, from the Ciclopi Islands Marine Protected Area, also contributing knowledge on distribution patterns.

**Keywords:** *Bryozoa, Polychaeta, Foraminifera, Algae, Ionian Sea*

Knowledge on epibiont communities on *Cystoseira* are scarce (Campisi et al., 1973). First information on bryozoans, serpuloids, ostracods and foraminifers from shallow-water communities sampled in the frame of the CIMPA-BioChange Project (Biodiversity and spatio-temporal variations of *Cystoseira* communities of the Biocoenosis of the Infralittoral Algae from the Ciclopi Islands Marine Protected Area, Ionian Sea) is presented. Samples were collected in June 2015, in two sites (three stations each), few km N of Catania: Punta Aguzza (Acicastello), within the Ciclopi Islands MPA, S. Maria La Scala and S. Tecla (Acireale), outside the CIMPA. Communities in the *Cystoseira brachycarpa*, *C. sauvageauana* and *C. spinosa*, were sampled at 5, 9, and 25 m depth, respectively. Bryozoans are present with more than 50 species, consisting mostly of cheilostomes (41 species) and subordinate cyclostomes and ctenostomes. However, several cyclostome species (particularly *Crisia* spp. and *Patinella radiata*) are dominant, with a high number of colonies. Cheilostomes, instead, are represented by single or few colonies, except for *Aetea* spp., *Copidozoum tenuirostre* and some cellederporiids. Among serpuloids, 20 species (14 serpulids and 6 spirorbids) have been detected. Spirorbids are greatly dominant in terms of specimens, mainly belonging to *Pileolaria* spp., *Janua* spp. and *Spirorbis cuneatus*. Serpulids are mostly represented by *Josephella marenzelleri* and *Pomatoceros triqueter*, followed by *Vermiliopsis straticeps* and *Serpula vermicularis*. Ostracods include some 25 species, that are all known from shallow-water vegetate bottoms. Species belonging to the genera *Xestoleberis* (especially *X. dispar*) and *Paradoxostoma* largely prevail. Foraminifers are represented by more than 30 species. Miliolids dominate (mostly with some *Quinqueloculina* species) followed by *Elphidium* representatives. Nearly all species were found on the algal thalli. Overall, invertebrate communities show low cover values. A general trend of increasing species diversity can be traced from the shallowest to the deepest communities. The number of specimens/colonies for each of the taxonomic group analysed appears to be related to the availability of suitable microhabitats and substrata created by the hosting algal species. Differences are also evident between the two sites, with samples collected within the CIMPA, characterised by a lower species diversity and specimen/colony abundance, in relation to those collected outside the MPA. Patterns of distribution were also evident for encrusting bryozoans, with some species restricted to, or preferentially colonising the basal or the top parts of the algal thalli. Adult serpuloid specimens were mostly localised on the axial thicker algal portions that provide a relatively firm substratum. Bryozoan colonies are invariably small but fertile, thus pointing to dominant r-strategy, as a special adaptation to the ephemeral substratum offered by the algae.

spirorbid *Pileolaria pseudomilitaris* on *H. scoparia*. Scale bar: 1mm. Sample CPA.1.Z26. F. The serpulids *Josephella marenzelleri* (left) and *Serpula concharum* (right). Scale bar: 5 mm. Sample SM.1.Z25.

### References

1 - Campisi M.R., Di Geronimo I., Furnari G., Scammacca B. (1973) - Premières observations sur les Algues, les Bryozoaires et les Mollusques d'un peuplement de *Cystoseira dubia* Valiante à l'île Lachea (Sicile orientale). Rapp. CIESMM, 22: 51-52.

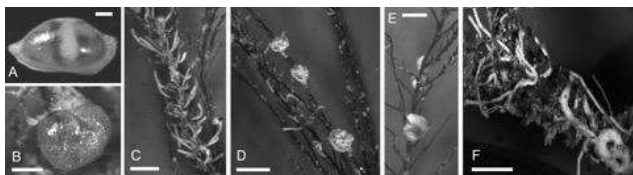


Fig. 1. A. The ostracod *Bairdia longevaginata*. Scale bar: 200 mm. Sample SM.1.S9. B. The foraminifer *Cibicides advenum*. Scale bar: 200 mm. Sample CPA.1.Z26. C. The bryozoan *Aetea anguina* on *Halopteris scoparia*. Scale bar: 1 mm. Sample ST.1.Z9. D. The bryozoan *Patinella radiata* on *H. scoparia*. Scale bar: 2 mm. Sample ST.1.Z9. E. The