

# IABO annual report to SCOR

## Major meetings

IABO held its last General Assembly at the World Conference on Marine Biodiversity, Aberdeen Scotland in October 2011.

Its next GA will be at WCMB III in Qingdao, China, October 2014, hosted by Dr Sun Song. The WCMB III Science Committee has been established. IABO seeks an IAPSO nominee.

The still growing Scientific Committee of the 3<sup>rd</sup> World Conference on Marine Biodiversity (WCMB) comprises:

- Dr John Gunn; CEO Australian Institute of Marine Science; **Australia**; Co-Chair Global Ocean Observing System
- Dr Sun Song; Director of the Institute of Oceanology; **China**; Executive Secretary of WCMB Organising Committee
- Prof Gray A Williams; Hon Director, The Swire Institute of Marine Science at The University of Hong Kong; **Hong Kong**; SWIMS
- Mr Ward Appeltans; Intergovernmental Oceanographic Commission (IOC) of UNESCO; **International**; Ocean Biogeographic Information System
- Prof. Dr. Phang Siew Moi; Director of Institute of Ocean & Earth Sciences (IOES) University of Malaya; **Malaysia**;
- Dr Malcolm Clark; National Institute of Water & Atmospheric Research (NIWA); **New Zealand**; INDEEP, the International Seabed Authority, GOBI, SOPAC in Fiji.
- Dr Mark J. Costello; University of Auckland; **New Zealand**; Chair of World Register of Marine Species, President International Association of Biological Oceanography (IABO), Scientific Committee on Ocean Research (SCOR)
- Prof David Patterson; St Andrews University; **Scotland, UK**; Co-convenor WCMB II
- Prof Charles Griffiths; University of Cape Town; **South Africa**; Systematics Society and a National Biodiversity Institute ( SANBI)
- Prof. Dr. Carlo Heip; Senior Advisor and Emeritus Director, Royal Netherlands Institute for Sea Research; **The Netherlands**; GEO-BON WG5 Marine Biodiversity, Marine Board of the European Science Foundation, ICES
- Dr Patricia Miloslavich; ; **Venezuela** ; Life in a changing Ocean (Census of Marine Life II)
- Dr J. Emmett Duffy; Virginia Institute of Marine Sciences; **USA**;
- Dr Kwang-Tsao Shao; Executive Officer for Systematics and Biodiversity Information Division, Academia Sinica; **Taipei, Taiwan**;
- Dr Martin Solan ; National Oceanography Centre, University of Southampton; **UK**; Co-convenor WCMB II
- Prof. Alex David Rogers; Department of Zoology, University of Oxford; **UK**; IPSO, GOC
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IABO seeks SCOR financial support toward WCMB III (e.g. travel grants).

## IUBS

The IABO President and Past-President attended and voted at IUBS GA and conference in China July 2012. Nils Stenseth (who has published in marine science) is the new IUBS President and is championing more holistic and integrated science, i.e. ‘One biology’.

## Executive Committee

In Aberdeen the committee was significantly expanded so it now comprises:

- Mark Costello (New Zealand) (World Register of Marine Species)

- Carlo Heip (The Netherlands, Belgium) (GEO BON marine WG Chair, organised WCMB I)
- Patricia Miloslavich (Venezuela) (Census of Marine Life follow-up)
- Annelies Pierrot (The Netherlands) (Past President)
- Mike Thorndyke (Sweden) (MARS, WAMS, EuroMarine)
- Sun Song (China) Convenor WCMB III
- David Patterson (UK) (convenor WCMB II)
- Charles Griffiths (South Africa)

Suggestions for new members who are international leaders in particular regional activities are welcomed (e.g. from Japan, USA, Australia).

### **Objectives**

Organise WCMB III.

Support SCOR through SCOR EC.

Act as advisor to SCOR and other organisations regarding marine biology and oceanography.

Generate some operating revenue from WCMB.

Improve networking through endorsement meetings and creating individual membership.

Develop regular medal or award in the field like IAPSO does.

## Related News

### World Register of Marine Species

- collaboration of near 300 scientists from 146 institutions and 32 countries.
- the most complete inventory of named marine species (95% species included).
- a free practical web resource for quality control of species names: there are over 400,000 marine species names but only half are accepted due to synonyms (plus misspellings).
- 26,000 images of species plus literature sources and information on distribution, habitat, parasite hosts, etc.
- Costs of continued development almost €500,000 including 2 FTE at host institute (Flanders Marine Institute VLIZ) and time of editors.
- Integrates over 70 Global, 16 Regional (all taxa) and 4 Thematic Databases
- 70,000 unique visitors to website per month
- 70 organisations using copies of database + 32 using Webservice
- Special WoRMS Collection of >15 papers to be launched in PLoS ONE next month
- 120+ author paper to be published in *Current Biology* (see below) next month

### Recent assessment (*Current Biology* in press)

- 226,000 described marine species
- Never so many marine species described as in the past decade (near 20,000)
- Almost 5,000 scientists described new marine species in past decade
- WoRMS editors described 1/3 of these species
- 65,000 species in specimen collections awaiting description
- On average, 1/3 species in less explored places may be new to science (suggesting at least 2/3 of all marine species may already be described)
- Experts estimate only 1/3 species described to date
- A statistical model estimated  $\frac{1}{2}$  ( $\frac{1}{4}$  to  $\frac{3}{4}$ ) species described to date
- May 'loose' 40,000 'species' due to as yet unrecognised synonyms but may gain similar number by using molecular methods to split some present 'cryptic' species
- Examples of the best known taxa (species groups) included mammals, birds, reptiles, insects and larger plants
- least known taxa included smaller crustaceans and molluscs (notably snails), round-worms and flatworms, flukes and sponges

### Outlook

- 'golden age for discovering marine biodiversity is now'
- Past estimates of over 1 million marine species highly unlikely
- Most marine species will be discovered this century
- Other communities should develop similar global collaborations to accelerate efficiency and access to their knowledge

### Ocean Biogeographic Information System

- Over 33 million species location records of ca. 120,000 species from over 1,100 datasets.
- Now governed by IOC with Secretariat at Ostend.

M. J. Costello, October 2012.