

EPC5: Exploring the Phycocosmos: A European Perspective

Over 350 scientists and post graduate students (representing 40 countries) descended on the island of Rhodes, Greece to attend the 5th European Phycological Congress (www.epcv.gr) from 4-9 September 2011. The meeting venue was the five-star Rodos Palace Hotel, which provided first class meeting facilities and accommodation. The Local Organizing Committee was composed of 14 members of the Hellenic Phycological Society (www.phycology.gr) and was chaired by Prof. Christos Katsaros. Alpha Mentor, a project management organization (www.alphamentor.gr), organized the website, processed the registrations, and planned the midweek excursions and social events with the capable hands of Anastasia T. Chatzinikolaou (Managing Director), Chryssoula Chatzigeorgiou (Congress Manager), and Angeliki Karakota and Giota Theochari (Conference Secretariats).

The Scientific Committee was composed of 15 members and was chaired by Prof Elliot Shubert. The Congress was composed of four invited Plenary speakers, eight Symposia with 40 invited speakers, 120 oral paper presentations and 175 poster presentations (over 100 student posters were judged for the Poster Prize competition).

An overview of the scientific programme was as follows. Each Symposium was followed by Oral and Poster presentations on related topics. The EPC5 Programme and Book of Abstracts were edited by Elliot Shubert and published by Taylor & Francis. The Programme and Book of Abstracts are available online at: <http://www.tandfonline.com/toc/tejp20/current>

Monday 5 September 2011

Plenary Talk

Sotiris Orfanidis - **Algal Changes in the Mediterranean Sea: Drivers, Effects and Policies**

Symposium 1: Environmental Stresses on Coastal Marine Algae

Co-Convenors: Murray Brown and Christian Wiencke

Kai Bischof - Cold-water macroalgae under a changing radiation and temperature regime: physiological responses and implications to community structure

Angela Wulff – Global climate change - What will happen to microphytobenthic communities?

Francisco J. L. Gordillo - Responses of marine seaweeds to ocean acidification in combination with other abiotic factors

Antonella Penna - Dynamics of harmful algal blooms in the Mediterranean Sea

Gareth A. Pearson - Evolutionary history, selection and adaptive divergence in ecologically similar canopy-forming brown algae in the Atlantic

Symposium 2: Algal Biotechnology

Co-Convenors: Vince Ördög and Otto Pulz

D.M.M. Kleinegris - AlgaePARC: Facing the challenges of microalgae mass production

Emilio Molina Grima – Expectations and challenges of microalgal-derived biofuels

Vítor Verdelho Vieira - Beyond biofuels from microalgae: Complimentary options and strategies

Geoffrey A. Codd - Algal and cyanobacterial toxins: Essential awareness and biotechnological opportunities

Miroslav Strnad - Plant hormones in algae - Potential use in agriculture

Tuesday, 6 September 2011

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Plenary

Heroen Verbruggen - **Diversity and Taxonomy of Seaweeds: An Evolutionary Perspective**

Symposium 3: DNA Taxonomy: Bar Coding and Species Delineation

Co-Convenors: Kerstin Hoef-Emden and Nina Lundholm

Frederik Leliaert - DNA-based species delimitation in algae

Line Le Gall – Advantages, limitations and challenges in developing DNA-barcoding for algae

Matthias Wolf - The ITS2 database: Sequence-structure phylogenetics and distinguishing species

Rowena F. Stern - Making sense of dinoflagellate diversity using DNA barcoding

Lucien Hoffmann - Cyanobacterial genomics: Advances for species concepts and taxonomy

Symposium 4: Cell Biology and Molecular Physiology of Algae

Co-Convenors: Peter Kroth and Ursula Luetz-Meindl

Brigitte Meunier-Gontero - Regulation of Calvin Cycle enzymes through protein-protein interactions in algae

Colin Brownlee – Ion channels, signalling and cellular function in algae: Clues on the origins of excitability in eukaryotes

Yusuke Matsuda - Molecular mechanisms of CO₂ sensing and signaling in marine diatoms

Karin Komsic-Buchmann - The exocyst complex is involved in contractile vacuole function in *Chlamydomonas reinhardtii*

María Segovia - Cell death or survival in the unicellular chlorophyte *Dunaliella*: The role of metacaspases and caspase-like proteases

Wednesday, 7 September 2011

Mid-congress excursion to Lindos or Symi Island and diving excursion

Education Workshop: “Algae and the Environment in Education”

Within the framework of EPC5, the Hellenic Phycological Society (HEL.P.S.) organized a workshop on the “importance of algae” for teachers and students. The organizing committee of the workshop was composed of 8 members of HEL.P.S., including the director of the Hydrobiological Station of Rhodes and 4 school teachers

involved in environmental education, and was chaired by Christos Katsaros: The programme of the workshop included :

1. Key presentations by:

- a) Eileen J Cox and Elliot Shubert - **Phycology in Schools in the UK**
- b) Maria Roussomoustakaki – **Importance of algae and phycology in education**

2. Presentations of works related to algae and the environment by groups of students of 11 schools from different places in Greece (mainly from Rhodes). An award was given to the best three presentations.

The presented works were supervised by teachers and their level was generally good. More than 50 students and more than 10 teachers attended the workshop and everyone was very enthusiastic.

The workshop continued with field and laboratory work on the next day (see below).

Thursday, 8 September 2011

Plenary

Eileen J Cox - **Evolution and Development in Microalgae - Have Gene Sequences Led Us Down a Blind Alley?**

Symposium 5: Molecular and Cellular Responses in Algae Induced by Changes in the Environment

Co-Convenors: Debora Iglesias-Rodriguez and Antonio Quesada

Assaf Vardi - Rewiring sphingolipid metabolic pathways during host-virus interactions in marine microalgae

David J. Suggett – Physiological signatures of microalgal photo-acclimation and - Adaptation to environmental change

Mario Lebrato - Elemental carbonate chemistry selectivity in coccolithophores in present and future oceans

M. Debora Iglesias-Rodriguez - The future of marine calcification: Observations of acclimation and adaptation to past and future marine chemistry

Antonio Quesada - The effects of a temperature increase on cyanobacterial ecology and cyanotoxins production: invasions and ecophysiological patterns

Symposium 6: Genetics of Speciation (Ecological and Molecular)

Co-Convenors: Olivier De Clerck and Gareth Pearson

Koen Sabbe - Speciation in diatoms: Recent insights, new paradigms?

Susana Coelho – The private life of *Ectocarpus*: Genetics of sex and alternation of generations

Ester A. Serrão - Genetic signatures of evolutionary dynamics in Fucaceae and *Fucus*: The ghost of range shifts and hybridization past

Christine Maggs - Speciation in red algae: A phylogeographic perspective

Nathalie Simon - Picoplankton speciation

Continuation of the workshop “Algae and the Environment in Education” with Field and Laboratory work

Members of the Hellenic Phycological Society, in collaboration with the Hydrobiological Station of Rhodes (branch of the Hellenic Marine Research Center, HCMR) organized seaweed sampling on a selected coast of Rhodes for the students and teachers participating in the workshop. The samples were transferred to the laboratory of the Hydrobiological Station, where the students had the opportunity to examine them under the microscope, to identify them and to make herbarium samples.

Friday, 9 September 2011

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Plenary

Jeanine L. Olsen - **Macroalgae and Climate Change**

Symposium 7: Algal Genomics

Co-Convenors: Angela Falciatore and Hervé Moreau

J. Mark Cock - Nature, nurture and the structure of macroalgal genomes

Nigel Grimsley – Diversity of marine Prasinophyceae and associated viruses

Chris Bowler - Genome-enabled explorations of evolutionary ecophysiology in marine diatoms

Thomas Mock - Environmental and functional genomics of marine microalgae

Klaus Valentin - The evolution of phytoplankton in the light of genomics

Symposium 8: Freshwater Algal Biogeography and Biodiversity

Co-Convenors: Maria Moustaka-Gouni and Elżbieta Wilk-Woźniak

Konstantinos Kormas - Algal biodiversity in the age of genomics and metagenomics

Stephen C. Maberly – Patterns of biodiversity change in freshwater phytoplankton

Elliot Shubert - Does phenotypic plasticity amplify the biodiversity signal?

Thomas Friedl - Assessing distribution patterns in terrestrial algae from various habitats: A molecular approach

Pauline Bazin - Phytoplankton diversity in estuaries under various climates: Morphologic & molecular approaches

Gala dinner at Kallithea springs

The winners of the Poster Prizes were announced.

First Prize (300€): Carolina Pena-Martín, University of Alicante, Alicante, Spain

Second Prize (200€): Daniela Schmid, Max Planck Institute for Chemical Ecology, Jena Germany

Third Prize (100€): Kimon Moschandreu, Department of Botany, School of Biology, Aristotle University, Thessaloniki, Greece

FEPS Council selected London, UK for EPC6 in 2015.

EPC5 is very grateful to the following sponsors:

Organisers: Hellenic Phycological Society and FEPS

Societies: British Phycological Society, Spanish Phycological Society, Phycological Section of the German Botanical Society, Algology Working Group of the Italian Botanical Society and Hydrobiological station of Rhodes

Exhibitors and Sponsors: Taylor and Francis Group, Allen Press, Heniz WALZ GmbH, Total Foundation, Nearhus, Zeiss, Verlag Walter de Gruyter GmbH, Elsevier

The Hellenic Phycological Society sponsored a "G. Nikolaidis travel award" (in honour of the late Prof G. Nikolaidis) for a young phycologist to attend the Congress and 800€, was awarded to: Franz Goecke Saavedra, Christian-Albrechts University, Kiel, Germany.

In summary, the Congress was robust with concurrent sessions consisting of excellent plenary, symposia oral talks and posters over four days. A large lounge area in the proximity of the lecture rooms provided an ideal environment for networking and socializing.

Away from the lecture rooms, delegates had the opportunity to enjoy sunny and warm weather, a dip in the swimming pool or Aegean Sea, a tour and shopping in Rhodes old town as well as enjoying the Greek cuisine. Everyone seemed to enjoy the meeting and everyone was very sociable. The social on the last night was in a romantic setting of a villa at Kallithea springs where we were entertained with Greek dancing, music and cuisine. And everyone joined in to dance to the Greek music.