

FOREWORD

The Cephalopod International Advisory Council (CIAC) holds its statutory meeting every three years by inviting a local group of cephalopod scientists to organize its Symposium and Workshops on topical themes. Previous meetings in this series have been in Capetown, South Africa (1997); Naples, Italy (1994); Shimizu, Japan (1991); Washington D.C., United States (1988); and Banyuls-sur-Mer, France (1985). A brief overview of the history and achievements of the organization is provided by Eric Hochberg and Emma Hatfield in this volume.

Planning for the symposium and workshops for CIAC 2000 began shortly after publication of *The Role of Cephalopods in the World's Oceans*, a special issue of the *Philosophical Transactions of the Royal Society*, edited by Malcolm Clarke (1996, Phil. Trans. Roy. Soc. Lond. B 351: 977–1112). Drawing on the very extensive but dispersed literature on the trophic relations of cephalopods, a series of reviews provided insights into the scale of cephalopod biomass (and by implication production) estimated from predator consumption. The same volume also addressed the productive capabilities of cephalopods, their metabolism and growth, and probable scale of the food sources required to fuel that production. The idea for the symposium theme was to take these estimates a stage further by relating them to each other, testing whether the biomass estimates were compatible with productive capacity and relating them to other major components of marine productivity.

The overall scientific challenge presented by this issue is widely recognized and can be formulated into a series of questions as summarized by Peter Boyle in the introduction to the symposium. The symposium theme title “Cephalopod Biomass and Production,” drew a wide range of contributed papers from authors based in 24 countries. Many of them directly addressed the questions posed by the symposium theme and all of them contributed new knowledge essential to underpinning the understanding of the role of cephalopods in the marine ecosystem. The symposium content selected for this volume consequently covers the full range of current cephalopod studies, including their ecology, physiology, life cycle, behavior, systematics and fisheries.

The choice of topics for the workshop sessions responded to those areas of science in which rapid progress is being made and in which the workshop format would exchange information, stimulate discussion, lead to harmonisation of methods and define future objectives. Each of the four workshop topics was very well supported; many of the workshop contributions appear in this volume as full papers or as abstracts. In addition, an overview of each scientific field is provided in the introductory section of this volume.

Workshop 1: “Applications of GIS to Cephalopod Fisheries” – Graham Pierce, Jianjun Wang and Vasilis Valavanis.

Workshop 2: “Estimating Cephalopod Biomass” – Malcolm Clarke, Louise Allcock and Begoña Santos.

Workshop 3: “Past, present and future applications of DNA-based markers in cephalopod biology” – Paul Shaw

Workshop 4: “Systematics, Ecology and Biology of Cirrate Octopods” – Mike Vecchione, Martin Collins and Mike Sweeney.

During the Soviet era biological oceanographers and fisheries scientists from Russia and other countries of the former Soviet Union participated in one of the largest and most extensive programs of marine biological sampling ever undertaken in the world's oceans. Although the primary objective was to quantify the marine resources of the oceans, the research resulted in the collection of an enormous amount of biological material and data on the oceanic cephalopods of the world. A brief overview of the background and rationale of this program is provided by Kir Nesis. After the end of the Soviet era, when this global program was abandoned, an enormous amount of original information relevant to the role of cephalopods in oceanic food webs remained in Russian language journals and technical papers, very little of it available to the international scientific community.

For these reasons, an additional and special task set for the CIAC 2000 meeting was to encourage participation by scientists from the former Soviet Union countries and to include a substantial contribution from these sources in the proceedings from the meeting. With assistance from Kir Nesis (Institute of Oceanology, Moscow) and Paul Rodhouse (British Antarctic Survey and President of CIAC), and generous financial support from the European Union we were pleased to organize a special theme session of papers arising from this ex-Soviet Union work. Welcome in person at the Aberdeen meeting were: Slava Bizikov, Rudolf Burokovsky, Michael Chesalin, Julia Filippova, Oleg Katugin, Nikolay Mokrin, Kir Nesis, Chingis Nigmatullin, Rushan Sabirov and German Zuev. The papers published here are a selection of those from the Russian contribution presented at the meeting.

Peter Boyle, Martin Collins and Graham Pierce

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ACKNOWLEDGMENTS

We wish to acknowledge the enthusiasm and interest of the whole scientific community working with cephalopods for their support of this meeting, for coming to Aberdeen and making this the largest scientific meeting yet held under CIAC auspices (over 200 registered participants). Highlighting the particular fascination of cephalopod biology was the public lecture 'The Hunt for the Giant Squid' by the author Richard Ellis from New York. This lecture drew a large audience from a wide range of local people of all ages and did much to stimulate interest from news media in the scientific content of the meeting. Following his lecture, and with the platform support of a panel of cephalopod expertise, there was a lively and informative question and answer session. We are grateful to Richard Ellis and the panel (Malcolm Clarke, Angel Guerra, C.C. Lu, Kir Nesis, Takashi Okutani and Clyde Roper) for their expertise and engagement with the audience; to Malcolm and Dot Clarke for their giant squid scale models that dressed the lecture theatre in spectacular style; and to Professor C. Duncan Rice, Principal of the University of Aberdeen, for contributing the refreshments for the evening activities. The official welcome to Aberdeen was made in traditional style by the Lord Provost and City Council at a reception in the City Council Chambers.

We especially want to thank Jan Flint, our conference organiser, for her mastery of the arrangements and attention to detail, and Jenny Watson for her sustained input to the technical work of editing of the conference volume. The European Union (contract number QLAM-PL1999-30001) provided generous financial assistance from the FAIR programme for the conference arrangements as a whole, but particularly in support of the ex-Soviet contributions and the publication of these proceedings. The symposium steering committee and workshop convenors (Peter Boyle, Martin

Collins, Graham Pierce, Malcolm Clarke, Paul Rodhouse, Louise Allcock, Paul Shaw, Mike Vecchione) also thank the following crew of conference assistants from the University of Aberdeen who contributed so much to the smooth running of the arrangements during the meeting – Fiona Murray, Heather Daly, Jo Murphy, Cynthia Yau, Linda Key, Marianne Nyegaard, Gabi Stowasser, Barry Ward, Camila Henriques, Mary O’Dea, Iona Macphee, Antoine Vigneau, Anna Goostrey, Aidan Emery, Begoña Santos.

Finally, we thank the authors of all the papers arising from the meeting and published in this volume of the *Bulletin of Marine Science*, for their considerable efforts on their manuscripts. All of them have been thoroughly peer-reviewed and we gratefully acknowledge the time and expertise of the following reviewers for their generous contributions to the scientific content and presentation of the finished work.

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