

## Foreword

We are very pleased to present this book, which brings together some of the contributions presented at the 29<sup>th</sup> Annual Larval Fish Conference of the Early Life History Section (ELHS) of the American Fisheries Society, USA, held in Barcelona, Spain, from 11<sup>th</sup> to 14<sup>th</sup> July 2005. The 29<sup>th</sup> Annual Larval Fish Conference meeting was hosted by the Institut de Ciències del Mar of the Consejo Superior de Investigaciones Científicas (CSIC). The local organising committee was composed of ichthyoplankton researchers from the Institut de Ciències del Mar, the Instituto Español de Oceanografía, the Fundación AZTI, and the Centre d'Aqüicultura of the IRTA. Two members of the ELHS helped to organise this Conference. The programme committee consisted of I. Palomera (CSIC), A. Sabatés (CSIC), H. Browman (Institute of Marine Research, Norway) and J.J. Govoni (National Oceanic and Atmospheric Administration, Beaufort, USA), with M.P. Olivar (CSIC) as chair. The programme committee developed the outline for the conference and invited keynote contributors.

This was the first time that an international ichthyoplankton congress had been held in Spain. Fisheries are an important economic activity in Spain. Although research on fish biology dates from the beginning of the last century, research on the early life history of fishes in Spain began in the 1960s and expanded tremendously in the 1980s. Since then, important research by a number of scientific teams working actively throughout Spain has contributed to the general knowledge of fish eggs, larvae, and juveniles. This research has ranged in scope from systematics to processes relevant to population recruitment. Some of this important work has been published in *Scientia Marina*.

The format of the Conference in Barcelona was similar to that of other Annual Larval Fish Conferences. Contributed presentations were structured around six Theme Sessions. Some of the sessions were opened by Keynote Addresses.

In addition to oral presentations, poster contributions were displayed,

The objectives of the 29<sup>th</sup> Annual Larval Fish Conference were to bring together the research community actively working on, or interested in, all aspects of the early life history of fishes, and to provide a forum for the exchange of information and ideas. This objective was accomplished with 170 delegates from different parts of the world attending the Conference. One hundred and one attended from Europe, of which 41 came from Spain. In addition, 40 were from USA, 13 from Canada, 9 from Japan, and 8 from Australia.

The Themes Sessions of the Conference, and the papers in this book, dealt with some of the most relevant topics of ichthyoplankton research:

*Theme Session 1:* Relationship between ecosystem features and the diversity of larval fish assemblages.

*Theme Session 2:* Fronts, eddies and early life histories.

*Theme Session 3:* Larval condition, growth and survival.

*Theme Session 4:* Effects of environmental variability on life history strategies and recruitment: global climate change.

*Theme Session 5:* Functional morphology, physiology and behaviour.

*Theme Session 6:* Fish development and systematics: new genetic advances and classical views.

There were 100 oral and 64 poster presentations. We thank all the contributors for their presentations and for their exchange of ideas. Papers for this book were first presented during the Conference and prepared, peer-reviewed, and edited thereafter. We express our gratitude to all our colleagues who assisted in the peer review process, their work contributed substantially to the improvement of this book. The outcome is a set of papers dealing with relevant topics on fish larval ecology and the dynamics of marine ecosystems. We trust that the readers will find this book interesting, helpful, and useful.

One of the Theme Sessions addressed fish development and systematics: new genetic advances and classical views. The first two papers present new approaches and tools for the identification of the early stages of fishes.

The next three papers relate to functional morphology, physiology and behaviour, and include a thoughtful review on how vitamins in maternal diet influence the quality of offspring.

The next three contributions deal with larval condition, growth and survival, the subject of the third Theme Session. The analysis of the microstructure of otoliths, combined with the assessment of the biochemical constituents of larvae collected in the field is used to elucidate growth and condition, i.e. survival potential. Studies of species and taxa as diverse as the Clupeidae and Thunnidae are presented.

Fronts, eddies, and early life histories was the subject of a small, but interesting Theme Session in which Andrew Bakun presented his thoughts on the role played by fronts and eddies in generating pattern in pelagic habitats, the distribution and survival of ichthyoplankton, and the prey and predators of fish larvae.

Ichthyoplankton distribution and transport, and the effect of environmental factors on spawning and nursery areas for several species, are presented in the last five papers of this book.

On behalf of the Organising Committee we would like to thank the following institutions for providing financial support: "Ministerio de Educación y Ciencia" (MEC) and "Consejo Superior de Investigaciones Científicas" (CSIC), the "Departament d'Agricultura Ramaderia i Pesca" (DARP), the "Agencia de Gestió d'Ajuts Universitaris i de Recerca" (AGAUR) and the "Centre de Referència de Recerca i Desenvolupament en Aqüicultura (CRA-CIRIT)" of the "Generalitat de Catalunya", the "Fundación AZTI" and the "Instituto Español de Oceanografía" (IEO), all of Spain; the Early Life History Section of the American Fisheries Society, NOAA (National Marine Fisheries Service and National Ocean Service) of the USA; and Loligo Systems. We would also like to express our gratitude to all the students who helped during the conference.

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M.P. Olivar and J.J. Govoni