

THE EUROPEAN ANCHOVY AND ITS ENVIRONMENT

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FOREWORD

The European anchovy (*Engraulis encrasicolus*, L.) constitutes one of the most important fishery resources of the European Atlantic and the Mediterranean. For that reason, very diverse studies on different aspects concerning this species have been conducted since long ago. Most early works were summarized by N. Demir in 1965, in his synopsis on biological data of European anchovy. Nevertheless, even very basic knowledge on fundamental traits of anchovy biology have been acquired only recently. Some of these aspects, such as annual fecundity which was systematically underestimated previously, are essential in the assessment and management of anchovy populations. Other recent research include studies linking different life-history stages to environmental factors, studies on population genetics to define the degree of isolation between so called stocks, studies on the estimation of biomass indices by means of the Daily Egg Production Method and acoustic techniques, and so on.

Within the framework of a Concerted Action of the EC (AIR Project) undertaken by Spanish, French and Italian institutions, several meetings were organised to deal with different aspects of European anchovy research. The most relevant action was the Seminar on "Anchovy and its Environment" held in Sant Feliu de Guíxols (Girona, Spain) from May 30 to June 2, 1995, under the auspices of the Universitat de Girona (UdG) and convened by Carles Pla (UdG) and Isabel Palomera (ICM).

The main objective of this Seminar was to promote an international forum with the participation of the scientific community involved in European anchovy research and related environmental features, especially from the ecological point of view, as an essential step to create a basis for future research.

The organizers aimed at obtaining a complete "State of the Art" picture on European anchovy and its surrounding environment. To accomplish this, scientists of the European countries and others were invited to present lectures on their experience on the different research fields, thus gathering together a general overview of the research carried out on European anchovy, describing its environment in various ecosystems, early life history and biological aspects, assessment methods used and, finally, its exploitation pattern under diverse environmental situations.

A wide participation to the Seminar, including 59 scientists from twelve countries (Argentina, Croatia, France, Great Britain, Greece, Italy, Portugal, Russia, Spain, Ukraine, USA, and Yugoslavia) which covered the different European anchovy habitats (Bay of Biscay, northeastern Atlantic, western Mediterranean, Adriatic, Aegean and Black Seas) gave a general overview of the present situation regarding this species.

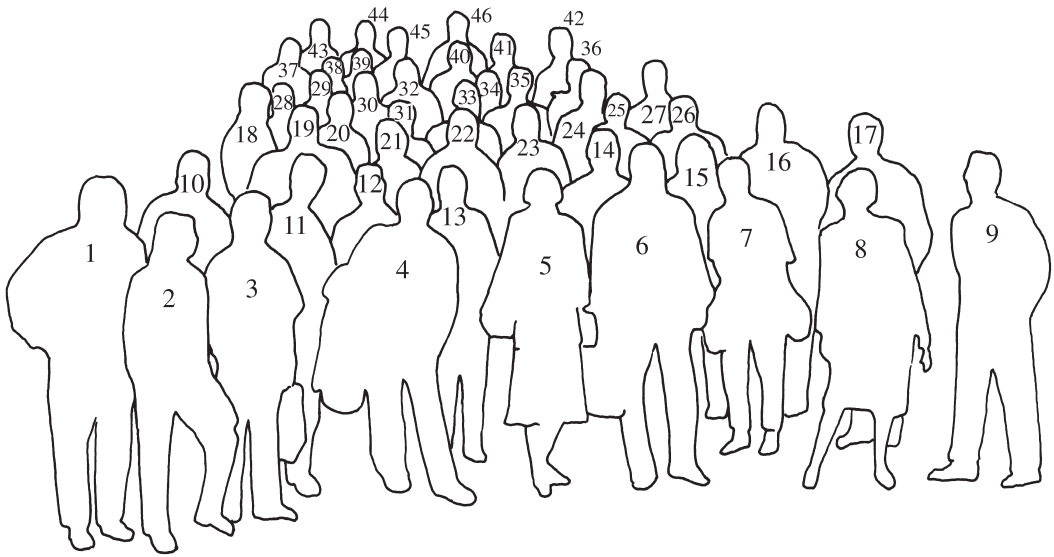
The Seminar was structured in four Sessions that have been kept as chapters in the organization of the present volume:

- 1 - Regional review of environmental conditions of anchovy habitats.
- 2 - Environment and early life history of anchovy.
- 3 - Adult anchovy biology: Reproduction, feeding, and population structure.
- 4 - Fisheries: Description, assessment, and exploitation levels.

Most papers contributed to the Seminar are presented here. The abstracts of other four are included at the end of the volume.

Finally, the Editors would like to acknowledge the facilities made available at the Sant Feliu venue by the Universitat de Girona as well as the organization tasks of the Seminar performed by Dr. Carles Pla and his team (Dr. María Inés Roldán, Ms. Francesca Ribas, and Ms. Laura Ripoll). We are also grateful to the DG XIV of the EC for funding the present publication and to SCIENTIA MARINA for welcoming it in its pages.

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CHAPTER 1

THE ENVIRONMENT OF THE ANCHOVY

