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Descrizione fisica	1 online resource (646 p.)
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Soggetti	Fish stock assessment Fishes - Reproduction Recruitment (Population biology) Fishery management
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Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Dedication; Title page; Copyright; Contributors; Preface; Acronyms; Introduction; Scope and organisation of the book; Summary; References; Part I Biology, Population Dynamics, and Recruitment; CHAPTER 1 Recruitment in Marine Fish Populations; 1.1 Introduction; 1.2 Recruitment theory; 1.3 Completing the life cycle; 1.4 Stability properties; 1.5 Multistage models; 1.6 Yield and sustainable harvesting; 1.7 Implications of maternal effects; 1.8 Recruitment variability; 1.9 Summary; References; CHAPTER 2 Reproductive Dynamics; 2.1 Introduction 2.2 Determination of final fecundity in fishes with different life styles2. 3 Reproductive strategies; 2.4 Egg structure and features of early ontogeny in fishes with different reproductive strategies; 2.5 Egg quality; 2.6 Influence of environmental factors on reproduction and recruitment; References; CHAPTER 3 Recruitment Variability; 3.1 Introduction; 3.2 Theories and hypotheses; 3.3 Physics and hydrography; 3.4 Biological (trophodynamic) factors; 3.5 Control and regulation: destabilizing and stabilizing processes; 3.6 A nod to life

histories: life styles and recruitment variability

3.7 Stock and recruitment 3.8 Modeling complex processes; 3.9 Solving the "recruitment problem"; 3.10 Conclusions; References; Notes;

CHAPTER 4 Effects of Fishing on the Population; 4.1 Introduction; 4.2 Why should fishing affect populations? Theoretical expectations; 4.3 Estimating fishing effects: the evidence; 4.4 Understanding the changes: the processes; 4.5 Fishing effects and management advice; 4.6 Conclusion: future challenges; 4.7 Acknowledgements; References;

Notes; Part II Information Critical to Successful Assessment and Management; CHAPTER 5 Egg, Larval, and Juvenile Surveys

5.1 Introduction 5.2 General considerations; 5.3 Egg production surveys; 5.4 Larval survival surveys; 5.5 Juvenile surveys; 5.6

Management; 5.7 Remote sensing; 5.8 Species assemblages and water masses; 5.9 Summary; References; CHAPTER 6 Stock Identification; 6.1

Introduction; 6.2 Stock definitions and stock identification methods; 6.3 Stock structure considerations for reproductive biology; 6.4

Implications of stock structure for conserving reproductive potential; 6.5 Conclusions; References; CHAPTER 7 Stock Assessment Models and Predictions of Catch and Biomass; 7.1 Introduction

7.2 Fish stocks, management measures and types of advice 7.3 The assessment problem and approaches to its solution; 7.4 A few case histories; 7.5 Incorporating understanding of the recruitment process

into predictions; References; Notes; CHAPTER 8 Applied Fisheries Reproductive Biology: Contribution of Individual Reproductive Potential

to Recruitment and Fisheries Management; 8.1 Introduction; 8.2 Reproductive styles of major commercial species; 8.3 Fecundity regulation; 8.4 Concluding remarks; 8.5 Acknowledgements;

References

Part III Incorporation of Reproductive Biology and Recruitment Considerations into Management Advice and Strategies

Considerations into Management Advice and Strategies

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## Sommario/riassunto

"This fully up-to-date, expanded and revised new edition has been written and compiled by some of the world's leading experts on fish reproduction and fisheries science. Following an introductory chapter, the book is broadly divided into three sections. The first section, Biology, Population Dynamics and Recruitment, covers recruitment in marine fish populations, reproductive dynamics, recruitment variability and the effects of fishing on fish populations. The book's second section concentrates on information critical to successful assessment and management, and includes in-depth information on egg, larval and juvenile surveys, stock identification and assessment models, predictions of catch and biomass, and the contribution of individual reproductive potential to recruitment and fisheries management. The book's final section covers the incorporation of reproductive biology and recruitment considerations into management advice and strategies, and includes chapters dealing with current paradigms and forms of advice, new approaches to management, and the implementation of information on stock reproductive potential in fisheries management. This excellent new edition provides vital information for fish biologists, fisheries scientist and managers, and should be found on the shelves of all libraries in universities and research establishments where biological sciences and fisheries management are studied and taught"--

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