Record Nr. UNINA9910455066203321 Autore Ford E. D (Edward David) **Titolo** Scientific method for ecological research / / E. David Ford [[electronic resource]] Cambridge:,: Cambridge University Press,, 2000 Pubbl/distr/stampa **ISBN** 1-107-11770-4 1-280-42074-X 0-511-32338-7 0-511-61255-9 0-511-04844-0 9786610420742 0-511-17342-3 0-511-15247-7 0-521-66973-1 Descrizione fisica 1 online resource (xix, 564 pages) : digital, PDF file(s) Disciplina 577/.07/2 Soggetti Ecology - Research - Methodology Science - Methodology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from publisher's bibliographic system (viewed on 05 Oct 2015). Includes bibliographical references (p. [525]-539). Nota di bibliografia Nota di contenuto Contents: Preface: Acknowledgements: 1 Component processes of ecological research: Introduction to Section I: Developing an analytical framework; 2 Five processes of research planning; 3 Conceptual and propositional analysis for defining research problems: 4 Development of a research plan; 5 How theories develop and how to use them; 6 The art of measurement and experiment; 7 Methods of reasoning in research; 8 Assessment of postulates; 9 Individual philosophies and their methods: Introduction to Section II: Making a synthesis for scientific inference 10 Properties and domains of ecological concepts11 Strategies of scientific research in ecology; 12 Use of mathematical models for

constructing explanations in ecology; Introduction to Section III:

Working in the research community; 13 Scientific research as a social process; 14 Values and standpoints and their influence on research;

Introduction to Section IV: Defining a methodology for ecological research; 15 The methodology of progressive synthesis; 16 Criticisms and improvements for the scientific method in ecology; Appendix: Suggestions for instructors; References; Glossary; Author index Subject index

Sommario/riassunto

Scientists tend to take the thought processes that drive their research for granted, often learning them indirectly by observing first their supervisors and then their colleagues. This book emphasises the advantages of being explicit about these thought processes and aims to help those undertaking ecological research to develop a critical attitude to approaching a scientific problem and constructing a procedure for assessment. The outcome is a text which provides a framework for understanding methodological issues and which assists with the effective definition and planning of research. As such it represents a unique resource for anyone embarking on their research career. It also provides a valuable source of information for those more experienced researchers who are seeking to strengthen the methodology underlying their studies or who have an interest in the analysis of research methods in ecology.