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Titolo	The ecological detective [[electronic resource]] : confronting models with data // Ray Hilborn and Marc Mangel
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Contents -- Preface: Beyond The Null Hypothesis -- 1. An Ecological Scenario and the Tools of the Ecological Detective -- 2. Alternative Views of the Scientific Method and of Modeling -- 3. Probability and Probability Models: Know Your Data -- 4. Incidental Catch in Fisheries: Seabirds in the New Zealand Squid Trawl Fishery -- 5. The Confrontation: Sum of Squares -- 6. The Evolutionary Ecology of Insect Oviposition Behavior -- 7. The Confrontation: Likelihood and Maximum Likelihood -- 8. Conservation Biology of Wildebeest in the Serengeti -- 9. The Confrontation: Bayesian Goodness of Fit -- 10. Management of Hake Fisheries in Namibia -- 11. The Confrontation: Understanding How the Best Fit Is Found -- APPENDIX. "The Method of Multiple Working Hypotheses" / Chamberlain, T. C. -- References -- Index
Sommario/riassunto	The modern ecologist usually works in both the field and laboratory, uses statistics and computers, and often works with ecological concepts that are model-based, if not model-driven. How do we make the field and laboratory coherent? How do we link models and data? How do we use statistics to help experimentation? How do we integrate modeling and statistics? How do we confront multiple hypotheses with data and assign degrees of belief to different hypotheses? How do we

deal with time series (in which data are linked from one measurement to the next) or put multiple sources of data into one inferential framework? These are the kinds of questions asked and answered by *The Ecological Detective*. Ray Hilborn and Marc Mangel investigate ecological data much as a detective would investigate a crime scene by trying different hypotheses until a coherent picture emerges. The book is not a set of pat statistical procedures but rather an approach. *The Ecological Detective* makes liberal use of computer programming for the generation of hypotheses, exploration of data, and the comparison of different models. The authors' attitude is one of exploration, both statistical and graphical. The background required is minimal, so that students with an undergraduate course in statistics and ecology can profitably add this work to their tool-kit for solving ecological problems.
