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Nota di contenuto	Frontmatter -- CONTENTS -- PREFACE: BEYOND THE DESIGN METAPHOR -- PART ONE. PROLEGOMENA -- PART TWO. HOW DID WE GET INTO THIS MESS? FROM SOCRATES AND LUCRETIUS TO CUVIER AND DARWIN -- PART THREE. EVOLUTION IN MENDELIAN POPULATIONS: TELEOLOGY GETS MATHEMATICAL -- PART FOUR. THE CONDITIONS FOR EXISTENCE AND EVOLUTIONARY BIOLOGY -- Conclusion -- Epilogue: Evolutionary Biology and Intelligent Design -- GLOSSARY -- REFERENCES -- INDEX
Sommario/riassunto	More than two centuries ago, William Paley introduced his famous metaphor of the universe as a watch made by the Creator. For Paley, the exquisite structure of the universe necessitated a designer. Today, some 150 years since Darwin's On the Origin of Species was published, the argument of design is seeing a revival. This provocative work tells how Darwin left the door open for this revival--and at the same time argues for a new conceptual framework that avoids the problematic teleology inherent in Darwin's formulation of natural selection. In a wide-ranging discussion of the historical and philosophical dimensions of evolutionary theory from the ancient Greeks to today, John Reiss

argues that we should look to the principle of the conditions for existence, first formulated before *On the Origin of Species* by the French paleontologist Georges Cuvier, to clarify the relation of adaptation to evolution. Reiss suggests that Cuvier's principle can help resolve persistent issues in evolutionary biology, including the proper definition of natural selection, the distinction between natural selection and genetic drift, and the meaning of genetic load. Moreover, he shows how this principle can help unite diverse areas of biology, ranging from quantitative genetics and the theory of the levels of selection to evo-devo, ecology, physiology, and conservation biology.

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