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| 1. Record Nr.           | UNINA9910462600303321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Autore                  | Odling-Smee F. John <1935->                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Titolo                  | Niche construction [[electronic resource] ] : the neglected process in evolution / / F. John Odling-Smee, Kevin N. Laland, and Marcus W. Feldman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Edizione                | [Course Book]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Descrizione fisica      | 1 online resource (489 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Collana                 | Monographs in population biology ; ; no. 37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Altri autori (Persone)  | LalandKevin N<br>FeldmanMarcus W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Disciplina              | 577.8/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Soggetti                | Niche (Ecology)<br>Evolution (Biology)<br>Human ecology<br>Electronic books.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Note generali           | Description based upon print version of record.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Nota di bibliografia    | Includes bibliographical references (p. [421]-455) and index.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Nota di contenuto       | Front matter -- Contents -- Figures -- Tables -- Preface -- 1. Introduction -- 2. The Evidence for Niche Construction -- 3. A Theoretical Investigation of the Evolutionary Consequences of Niche Construction -- 4. General Qualitative Characteristics of Niche Construction -- 5. Niche Construction and Ecology -- 6. Human Niche Construction, Learning, and Cultural Processes -- 7. Testing Niche Construction 1: Empirical Methods and Predictions for Evolutionary Biology -- 8. Testing Niche Construction 2: Empirical Methods, Theory, and Predictions for Ecology -- 9. Testing Niche Construction 3: Empirical Methods and Predictions for the Human Sciences -- 10. Extended Evolutionary Theory -- Appendix 1: Model 1a -- Appendix 2: Model 1b -- Appendix 2: Model 1b -- Appendix 3: Model 2 -- Appendix 4: Models 3 and 4 -- Appendix 5: Model 5 -- Glossary of New Terms -- Bibliography (indexed) -- Index |
| Sommario/riassunto      | The seemingly innocent observation that the activities of organisms bring about changes in environments is so obvious that it seems an unlikely focus for a new line of thinking about evolution. Yet niche                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

construction--as this process of organism-driven environmental modification is known--has hidden complexities. By transforming biotic and abiotic sources of natural selection in external environments, niche construction generates feedback in evolution on a scale hitherto underestimated--and in a manner that transforms the evolutionary dynamic. It also plays a critical role in ecology, supporting ecosystem engineering and influencing the flow of energy and nutrients through ecosystems. Despite this, niche construction has been given short shrift in theoretical biology, in part because it cannot be fully understood within the framework of standard evolutionary theory. Wedding evolution and ecology, this book extends evolutionary theory by formally including niche construction and ecological inheritance as additional evolutionary processes. The authors support their historic move with empirical data, theoretical population genetics, and conceptual models. They also describe new research methods capable of testing the theory. They demonstrate how their theory can resolve long-standing problems in ecology, particularly by advancing the sorely needed synthesis of ecology and evolution, and how it offers an evolutionary basis for the human sciences. Already hailed as a pioneering work by some of the world's most influential biologists, this is a rare, potentially field-changing contribution to the biological sciences.

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