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| 1. Record Nr.           | UNINA9910140481903321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Titolo                  | Animal signaling and function : an integrative approach / / edited by Duncan J. Irschick, Mark Briffa, Jeffrey Podos ; cover image, Anthony O'Toole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Pubbl/distr/stampa      | Hoboken, New Jersey : , : Wiley Blackwell, , 2015<br>©2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ISBN                    | 1-118-96662-7<br>1-118-96660-0<br>1-118-96661-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Descrizione fisica      | 1 online resource (660 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Disciplina              | 591.59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Soggetti                | Animal communication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Note generali           | Description based upon print version of record.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Nota di bibliografia    | Includes bibliographical references at the end of each chapters and index.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Nota di contenuto       | Cover; Title Page; Copyright; Contributors; Chapter 1: Introduction; References; Chapter 2: Early Life-History Effects, Oxidative Stress, And The Evolution And Expression Of Animal Signals; Introduction; Signaling; Early Life-History Effects and Resource Allocation Trade-Offs; Oxidative Stress As a Mediator of Resource Allocation Trade-Offs; Signals Expressed During Development; Signals Expressed During Adulthood; Competition-Dependent Sexual Signals; Conclusions; Acknowledgments; References; Chapter 3: A Performance-Based Approach to Studying Costs of Reliable Signals; Introduction Receiver-Independent CostsReceiver-Dependent Costs; Compensatory Traits; Conclusions; Acknowledgments; References; Chapter 4: Cognitively Driven Co-Option and the Evolution of Complex Sexual Displays in Bowerbirds; Introduction; Cognition, Co-Option, and Complex Display; Delayed Male Maturity, Male-Male Courtship, and Display Trait Acquisition; Female Signaling to Affect Male Display Intensity: An Innovation that Improves Courtship Success; Mate Searching and Flexibility in Adaptive Decision-Making; Female Uncertainty and Flexibility in Active Mate Assessment Long-Term Age-Related Improvement in Decoration Display: |

Symmetrical Decoration Displays on Older Males' Bowers  
Anticipation of Male Routes During Courtship: Paths on Display Courts of Spotted Bowerbirds; Some Other Possible Cognitive Display-Related Behaviors of Bowerbirds; Construction of Successive Scenes for Females Visiting the Bower; Cognitive Aspects of Bower Building: Age-Related Improvement in Construction and Novel Techniques for Maintaining Symmetry; Cognitive Flexibility and Innovation in Display; Decoration Stealing: An Innovation for Display Trait Acquisition  
Cooperating with Relatives for Display: An Innovation to Reduce Sexual Competition  
Vocal Mimicry: Learning and Innovation in Use of Co-Opted Displays; Co-Option Mechanism; Cognition in Display Trait Acquisition; References; Chapter 5: Integrating Functional and Evolutionary Approaches to the Study of Color-Based Animal Signals; Introduction; Color Signal Production in More Detail; Signals, Honesty, and Condition-Dependence; Coloration as An Honest Advertisement; Trinidadian Guppies (*Poecilia reticulata*); Pierid Butterflies (Subfamily Coliadinae); Birds; Discussion/Conclusion/Future Work  
Acknowledgments  
References; Chapter 6: Agonistic Signals: Integrating Analysis of Functions and Mechanisms; Animal Contests and the Evolution of Agonistic Signals; Empirical Approaches to Testing Theory: "Physiological Costs," "Stamina," and "Performance"; Energy Status and Agonistic Signals; Whole Body Performance and Agonistic Signals; Conclusions; References; Chapter 7: Acoustic Signal Evolution: Biomechanics, Size, and Performance; Introduction; Biomechanics; Body Size; Performance; Concluding Remarks; Acknowledgments; References  
Chapter 8: Dishonest Signaling During Aggressive Interactions: Theory and Empirical Evidence

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## Sommario/riassunto

The diversity of animal signals has been widely documented, and the generality of animal signals also tantalizingly suggests that there are common mechanisms that have selected for their origin. However, while much progress has been made on some fronts, we still lack a general theory about why the diversity of signaling structures exist. Our compilation will directly address this gap by focusing on an exciting new arena of sexual selection, namely using functional approaches to understand signaling. This approach is rooted in the idea that many signals are designed to transmit important fun

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