Acoustic Communication in Birds Song Learning and Its Consequences

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Acoustic Communication in Birds - Kroodsma - 1983-05-10
Acoustic Communication in Birds, Volume 2: Song Learning and Its Consequences investigates acoustic communication in birds, with emphasis on song learning and its consequences. Some issues in the study of bird sounds are discussed, with particular reference to evolutionary considerations. The ontogeny of acoustic behavior in birds is also considered, along with sound production, neural control of song, and auditory
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Subsequent chapters explore
the role of subsong and
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**Acoustic Communication in Birds** - Kroodsma -
2012-12-02
Acoustic Communication in Birds, Volume 1: Production, Perception, and Design
Features of Sounds presents the scientific study of bird vocalizations. This book between the physical structure of bird vocalization and their quality as perceived by the recipient. Organized into nine chapters, this volume begins with an overview of the first sound recording of bird sound. This text then outlines some of the complex processes and events between sound production and behavior response to sound. Other chapters consider the study of neural control of vocalizations in birds. This book discusses as well the acoustic information transmitted through the wide range of habitats plays a crucial role in different avian behaviors, including individual and species recognition, territorial defense, mate selection, and song learning. The final chapter deals with a more detailed functional interpretation of a particular sound. This book is a valuable resource for ornithologists, ethologists, and research workers.

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**Acoustic Communication in Birds: Song learning and its consequences** - Donald E. Kroodsma - 1982

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**Acoustic Communication in Birds** - Kroodsma - 1983-04-11

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Ecology and Evolution of Acoustic Communication in Birds - Donald E. Kroodsma - 1996
Twenty-five invited papers reviewing the contributing ornithologists' current research in birds' acoustic communication with an ecological and evolutionary focus, and also identifying the areas they feel will dominate future research efforts. The discussions center around the areas of vocal developm

Coding Strategies in Vertebrate Acoustic Communication - Thierry Aubin - 2020-03-28
Information is a core concept in animal communication: individuals routinely produce, acquire, process and store information, which provides the basis for their social life. This book focuses on how animal acoustic signals code information and how this coding can be shaped by various environmental and social constraints. Taking birds and mammals, including humans, as models, the authors explore such topics as communication strategies for “public” and “private” signaling, static and dynamic signaling, the diversity of coded information and the way information is decoded by the receiver. The book appeals to a wide audience, ranging from bioacousticians, ethologists and ecologists to evolutionary biologists. Intended for students and researchers alike, it promotes the idea that Shannon and Weaver’s Mathematical Theory of Communication still
Intended for students and researchers alike, it promotes the idea that Shannon and Weaver’s Mathematical Theory of Communication still represents a strong framework for understanding all aspects of the communication process, including its dynamic dimensions.

**The Neuroethology of Birdsong** - Jon T. Sakata - 2020-03-19
Vocal signals are central for social communication across a wide range of vertebrate species; consequently, it is critical to understand the mechanisms underlying the learning, control, and evolution of vocal communication. Songbirds are at the forefront of research into such neural mechanisms. Indeed, songbirds provide a particularly important model system for this endeavor because of the many parallels between birdsong and human speech. Specifically, (1) songbirds are one of the few vertebrate species that, like humans, learn their vocal...
processes underlying song learning, of the neural circuits for song learning and control as well as for the extraction and processing of song information, of the selection pressures underlying song evolution, and of genetic and molecular mechanisms underlying the learning and evolution of song. The primary goals of this volume are to provide comprehensive, integrative, and comparative perspectives on birdsong and to underscore the importance of birdsong to biomedical research, evolutionary biology, and behavioral systems, and computational neuroscience. The target audience of this volume will be graduate students, postdoctoral fellows, and established academics and neuroscientists who are interested in mechanisms of communication from an integrative and comparative perspective. The volume is intended to function as a high-profile and contemporary reference on current work related to the learning, control, processing, and evolution of birdsong. This
system for this endeavor to comparative and sensory biologists, neurophysiologists, and behavioral, systems, and cognitive neuroscientists who attend meetings such as the Society for Neuroscience, the International Society for Neuroethology, and the Society for Integrative and Comparative Biology. Because of the relevance of birdsong research to understanding human speech, it is likely that the volume will also be of interest to speech researchers and clinicians researching communication, motor, and sensory processing disorders.

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**Songs, Roars, and Rituals**
Lesley J. Rogers - 2002-03
From the calling macaw and the roaring lion to the dancing lyrebird, animals all around us can be heard and seen communicating with each other and, occasionally, with us. Why they do so, what their
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Ecology of Sensing - Friedrich G. Barth - 2013-06-29
Sense organs serve as a kind of biological interface between the environment and the organism. Therefore, the relationship between sensory systems and ecology is very close and its knowledge of fundamental importance for an understanding of animal behavior. The sixteen chapters of this book exemplify the diversity of the constraints and opportunities associated with the sensation of stimuli representing different forms of energy. The book stresses the events taking place in the sensory periphery where the animal is exposed to and gets in touch with its natural habitat and acquires the information needed to organize its interaction with its environment. Ecology of Sensing brings together the leading experts in the field.
The last decades have brought a significant increase in research on acoustic communication in animals. Publication of scientific papers on both empirical and theoretical aspects of this topic has greatly increased, and a new journal, Bioacoustics, is entirely devoted to such articles. Coupled with this proliferation of work is a recognition that many of the current issues are best approached with an interdisciplinary perspective, requiring technical and theoretical contributions from a number of areas of inquiry that have traditionally been separated. With the notable exception of a collection edited by Lewis (1983), there have been few volumes predominately focused on technical issues in comparative bioacoustics to follow up the early works edited by Lanyon and Tavolga was the tremendous growth of expertise concerning this topic in particular that provided the initial impetus to organize this volume, which attempts to present fundamental information from both theoretical and applied aspects of current bioacoustics research. While a completely comprehensive review would be impractical, this volume offers a basic treatment of a wide variety of topics aimed at providing a conceptual framework within which researchers can address their own questions. Each presentation is designed to be useful to the broadest possible spectrum of researchers, including both those currently working in any of the many and diverse disciplines of bioacoustics, and others that may be new to such studies.
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**Vertebrate Sound
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Communication** - Roderick
A. Suthers - 2016-04-27
Although the fundamental
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**Acoustic Communication**
Andrea Simmons - 2006-04-18
In order to communicate, animals send and receive signals that are subject to their particular anatomical, psychological, and environmental constraints. This SHAR volume discusses both the production and perception of acoustic signals. Chapters address the information that animals communicate, how the communication is developed and learned, and how communication systems have adapted and evolved within species. The book will give examples from a variety of species.

**Vocal Communication in Birds and Mammals**
Marc Naguib - 2009-08-06
Advances in the Study of Behavior was initiated over 40 years ago to serve the increasing number of
of Female Song - Michelle L. Hall - 2017-09-11
Bird song, traditionally regarded as primarily a male trait, is in fact widespread among female songbirds and was probably present in the ancestor of modern songbirds (Odom et al 2014 Nature Communications). These recent findings challenge the view that sexual dimorphism in the expression and complexity of song is largely the outcome of sexual selection on males. It is now clear that understanding the evolution of bird song requires explaining variation within and among species in the expression and complexity of female song. To do this, we need a better understanding of the nature of variation in female song in different contexts and systems, as well as the fitness costs and benefits of variation in the expression and complexity of female song. This Research Topic draws together current research on female song with the goal of understanding the fitness costs and benefits of the diversity of female singing behaviour apparent among

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**Learning and Memory: A Comprehensive Reference** - - 2017-07-07

Learning and Memory: A Comprehensive Reference, Second Edition is the authoritative resource for scientists and students interested in all facets of learning and memory. This updated edition includes
of key terms that is helpful for of-the-art of research in this area. Coverage of sleep and memory has been significantly expanded, while neuromodulators in memory processing, neurogenesis and epigenetics are also covered in greater detail. New chapters have been included to reflect the massive increase in research into working memory and the educational relevance of memory research. No other reference work covers so wide a territory and in so much depth. Provides the most comprehensive and authoritative resource available on the study of learning and memory and its mechanisms Incorporates the expertise of over 150 outstanding investigators in the field, providing a ‘one-stop’ resource of reputable information from world-leading scholars with easy cross-referencing of related articles to promote understanding and further research Includes further reading for each chapter that helps readers continue their research Includes a glossary of key terms that is helpful for users who are unfamiliar with neuroscience terminology

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**Primate Vocal Communication** - Dietmar Todt - 2012-12-06

Communication is both a prerequisite and manifestation of social organization and in this sense several chapters of this volume are aimed to investigate the way vocal communication serves its ultimate function of maintaining social organization. Although manifold parallels exist to vocal communication in birds, additional mechanisms of primates. Treating the various psychological, ecological, behavioral, and neurobiological aspects of vocalization this book provides an interdisciplinary approach for the understanding of biocommunication in primates including humans. Conceptual as well as methodological considerations are given in a balanced way. The addition of a comprehensive glossary gives an overview also to nonspecialists in this field.

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**Sleep and Brain Activity** - Marcos G. Frank - 2012-07-18

In the last few decades, scientists have discovered that far from being a time of neural silence, sleep is characterized by complex patterns of electrical, neurochemical, and metabolic activity in the brain. Sleep and the Brain presents some of the more dramatic developments in our understanding of brain activity in sleep. The book discusses what parts of the brain are active in sleep and how, and presents research on the function of sleep in brain development. Coverage encompasses the network and membrane mechanisms responsible for waking and sleeping brain activity, the roles of glial cells in the sleeping brain, the molecular basis of sleep EEG rhythms, and research on songbirds, rodents, and humans indicating the function of sleep. Collates material dispersed across a wide gamut of primary literature into one place Focuses on the most interesting and prolific research results on brain activity as it relates to sleep Practical real data discussion includes functional brain imaging and EEG research

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Communication - Donald H. Owings - 2013-11-11
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ON THE FUTURE OF PERSPECTIVES When Patrick Bateson and Peter Klopfer offered me the editorship of Perspectives in 1992, the world of academic publishing was in one of its periodic upheavals. Subscriptions to series-even distinguished series such as Perspectives-had been declining and individual volume prices had been rising, a trend that if continued could only result in the series pricing itself out of the market. In the course of the negotiations around the change of editors, the publishers offered a cost-cutting solution: change the

Ontogeny and Phylogeny -
“Ontogeny recapitulates phylogeny” was Haeckel’s answer—the wrong one—to the most vexing question of nineteenth-century biology: what is the relationship between individual development (ontogeny) and the evolution of species and lineages (phylogeny)? In this, the first major book on the subject in fifty years, Stephen Jay Gould documents the history of the idea of recapitulation from its first appearance among the pre-Socratics to its fall in the early twentieth century. Mr. Gould explores recapitulation as an idea that intrigued politicians and theologians as well as scientists. He shows that Haeckel’s hypothesis—that human fetuses with gill slits are, literally, tiny fish, exact replicas of their water-breathing ancestors—had an influence that extended beyond biology into education, criminology, psychoanalysis (Freud and Jung were devout recapitulationists), and racism. The theory of recapitulation, Gould argues, finally collapsed not from the weight of contrary data, but because the rise of Mendelian genetics rendered it untenable. Turning to modern concepts, Gould demonstrates that, even though the whole subject of parallels between ontogeny and phylogeny fell into disrepute, it is still one of the great themes of evolutionary biology. Heterochrony—changes in developmental timing, producing parallels between ontogeny and phylogeny—is shown to be crucial to an understanding of gene regulation, the key to any rapprochement between molecular and evolutionary biology. Gould argues that the primary evolutionary value of heterochrony may lie in immediate ecological advantages for slow or rapid maturation, rather than in long-term changes of form, as all previous theories proclaimed. Neoteny—the opposite of recapitulation—is shown to be the most important determinant of human evolution. We have
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Ontogeny and Phylogeny - Stephen Jay Gould - 1985-01-17

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**Australian Magpie** - Gisela Kaplan - 2019-05-01

The Australian magpie is one of our nation’s most popular and iconic birds. It is loved for its impressive vocal abilities, propensity to play, excellent parenting and willingness to form enduring friendships with people. Written by award-winning author Gisela Kaplan, a leading authority on animal behaviour and Australian birds, this second edition of Australian Magpie is a thoroughly updated and substantially expanded account of the behaviour of these birds. With new chapters on classification, cognition and caring for young, it reveals the extraordinary capabilities of the magpie, including its complex social behaviour. The author, who has devoted more than 20 years to studying and
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**The Design of Animal Communication** - Marc D. Hauser - 1999

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Evolution of Communication Systems - Gerd B. Müller - 2004
Using a comparative approach in order to understand the origins of communication, this title explores the mysterious circumstances that surround the emergence of human languages, as well as the methods that other species use in order to communicate.

Nature's Music - Peter R. Marler - 2004-10-05
The voices of birds have always been a source of fascination. Nature’s Music brings together some of the world’s experts on birdsong, to review the advances that have taken place in our understanding of how and why birds sing, what their songs and calls mean, and how they have evolved. All contributors have strived to speak, not only to fellow experts, but also to the general reader. The result is a book of readable science, richly illustrated with recordings and pictures of the sounds of birds. Bird song is much more than just one behaviour of a single, particular group of organisms. It is a model for the study of a wide variety of animal behaviour systems, ecological, evolutionary and neurobiological. Bird song sits
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**Ecological and Environmental Science: A Research Perspective** - Hiren B. Soni, Ph.D. - The book “Ecological and Environmental Science: A Research Perspective” is a compilation of author’s original research papers, scientific articles, review articles, popular articles, general articles, and short notes on forest ecology,
conservation and ecology, bird ecology, and animal ecology. The book is a perfect amalgamation of burgeoning and thrust topics spanning biodiversity, and conservation and management of floral and faunal elements including ecology and biodiversity of phytoplankton, zooplankton, aquatic macrophytes, mangroves, terrestrial plants, animals (butterflies, reptiles, mammals) and birds. It covers ecological and environmental factors affecting abiotic and biotic components prevailed in forest, desert, grassland and wetland habitats and ecosystems. The present book highlights field studies and laboratory investigations carried out by the author during his research journey of 22 years (1998-2020). It discusses phenology, ethnobotanical, ethnomedicinal and aesthetic values of plants, resource use patterns by local inhabitants, socio-cultural aspects, livelihood dependency, rare and endangered plants, animals and birds, anthropogenic pressures, management strategies of endemic, exotic, and invasive species, and so on. The book covers unique and promising research topics e.g. hydrochemistry, geochemistry, biomonitoring of heavy metals in aquatic and terrestrial plants, metal remediation, environmental modeling, environmental archaeology, environmental bioindicators, environmental forensics, etc. The author believes that this book is a perfect blend of his research work on two integral branches of biology i.e. ecology and environmental science, which will undoubtedly enrich and enhance the knowledge and awareness of laymen and scientific community world over especially in the field of ecology and biodiversity of plants, animals, and birds, associated with physical, chemical, biological, ecological and environmental factors. The present book would certainly be useful and handy as a ready-reference material for students, academicians, researchers,
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**Biodiversity of Wetlands and Forests: A Nature Trail**
- Hiren B. Soni, Ph.D. -
The book “Biodiversity of Wetlands and Forests: A biodiversity of wetlands and forests with special emphasis on field observations of plants, reptiles, birds and mammals recorded by the author in various geographical provinces of Gujarat, India. It highlights the need of biodiversity conservation, causes and concerns, exploitation of biodiversity, habitat destruction, interaction of man and technology with biodiversity, policy framework for biodiversity conservation, and wilderness and forests. Moreover, it summarizes a review on birds with special emphasis on geographical and ecological distribution of avifauna of north-western India, birds in ancient times with myths and motifs, an integral association of trees and birds, birds migration, magnetic orientation of birds, and mythological beliefs about birds. The present book covers exhaustive information on wetlands for tourism, important wetlands of national importance, wise use, characteristics and prime importance of wetlands as
shared his incidental as well as subsisting experiences in amazing habitats amidst the nature trails of forested patches and thickets. This book will undoubtedly enrich and enhance the knowledge and awareness of naturalists in the field. This book is a blend of two previously published books by the same author (Hiren B. Soni, Ph.D.) viz. ‘Biodiversity, Birds and Wetlands’, and ‘Biodiversity and Birds: A Field Journey’. This book is published to be handy and helpful to every reader and amateur of the world. Author believes that it would surely be a ready-reference for every researcher as well as nature lover in each and every corner of the world.

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Advances in Vertebrate Neuroethology - Jorg-Peter Ewert - 2012-12-06
This volume presents the proceedings of the NATO Advanced Study Institute on "Advances in Vertebrate Neuroethology" held at the University of Kassel, Federal Republic of Germany in August 1981. During the last decade much progress has been made in understanding the neurophysiological bases of behavior in both vertebrates and invertebrates. The reason for this is that a number of new physiological, anatomical, and histochemical techniques have recently been developed for brain research which can now be combined with ethological methods for the analysis of animal behavior to form a new field of research known as "Neuroethology". The term Neuroethology was originally introduced by S.L.Brown and R.W.Hunsperger (1963) in connection with studies on the activation of agonistic behaviors by electrical brain stimulation in cats. Neuroethology was more closely defined by G.Hoyle (1970) in the context of a review on cellular mechanisms underlying behavior of invertebrates. Since the 6th annual meeting of the Society for Neuroscience held in Toronto in 1976, Neuroethology has become established as a session topic.

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Advances in the Study of Behavior - Peter J.B. Slater - 2003-12-18
The aim of Advances in the Study of Behavior remains as it has been since the series began: to serve the increasing number of scientists who are engaged in the study of animal behavior by presenting their theoretical ideas and research to their colleagues and to those in neighboring fields. We hope that the series will continue its "contribution to the development of the field", as its intended role was phrased in the Preface to the first volume in 1965. Since that time, traditional areas of animal behavior have achieved new vigor by the links they have formed with related fields and by the closer relationship that now exists between those studying animal and human subjects.

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Music of the Birds - Lang Elliott - 1999
Presents the songs and calls of more than seventy North American birds. Includes audio compact disc featuring songbird concerts and solos.

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The Physics of Birdsong - Gabriel B. Mindlin - 2006-03-30
Detailed report on a topic that has already attracted much popular interest. Provides fascinating reading for physicists, biologists and general readers alike.

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Australian Magpie - Gisela T. Kaplan - 2004
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**Encyclopedia of Language and Linguistics** - 2005-11-24  
The first edition of ELL (1993, Ron Asher, Editor) was hailed as "the field's standard reference work for a generation". Now the all-new second edition matches ELL's comprehensiveness and high quality, expanded for a new generation, while being the first encyclopedia to really exploit the multimedia potential of linguistics. * The most authoritative, up-to-date, comprehensive, and international reference source in its field * An entirely new work, with new editors, new authors, new topics and newly handful of classic articles * The first Encyclopedia to exploit the multimedia potential of linguistics through the online edition * Ground-breaking and International in scope and approach * Alphabetically arranged with extensive cross-referencing * Available in print and online, priced separately. The online version will include updates as subjects develop ELL2 includes: * c. 7,500,000 words * c. 11,000 pages * c. 3,000 articles * c. 1,500 figures: 130 halftones and 150 colour * Supplementary audio, video and text files online * c. 3,500 glossary definitions * c. 39,000 references * Extensive list of commonly used abbreviations * List of languages of the world (including information on no. of speakers, language family, etc.) * Approximately 700 biographical entries (now includes contemporary linguists) * 200 language maps in print and online Also available online via ScienceDirect – featuring extensive browsing,
second edition matches ELL's comprehensiveness and high quality, expanded for a new generation, while being the first encyclopedia to really exploit the multimedia potential of linguistics. * The most authoritative, up-to-date, comprehensive, and international reference source in its field * An entirely new work, with new editors, new authors, new topics and newly commissioned articles with a handful of classic articles * The first Encyclopedia to exploit the multimedia potential of linguistics through the online edition * Ground-breaking and international in scope and approach * Alphabetically arranged with extensive cross-referencing * Available in print and online, priced separately. The online version will include updates as subjects develop ELL2 includes: * c. 7,500,000 words * c. 11,000 pages * c. 3,000 articles * c. 1,500 figures: 130 halftones and 150 colour * Supplementary audio, video and text files online * c. 3,500 glossary definitions * c.

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**The Language Organ** - Professor Stephen R Anderson - 2002-09-19
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**Bird Minds** - Gisela Kaplan - 2015-08-03
In her comprehensive and carefully crafted book, Gisela Kaplan demonstrates how intelligent and emotional Australian birds can be. She describes complex behaviours such as grieving, deception, problem solving and the use of tools. Many Australian birds cooperate and defend each other, and exceptional ones go fishing by throwing breadcrumbs in the water,
intelligent and emotional prey and use tools to crack open eggshells and mussels. The author brings together evidence of many such cognitive abilities, suggesting plausible reasons for their appearance in Australian birds. Bird Minds is the first attempt to shine a critical and scientific light on the cognitive behaviour of Australian land birds. In this fascinating volume, the author also presents recent changes in our understanding of the avian brain and links these to life histories and longevity. Following on from Gisela’s well-received books on the Australian Magpie and the Tawny Frogmouth, as well as two earlier titles on birds, Bird Minds contends that the unique and often difficult conditions of Australia’s environment have been crucial for the evolution of unusual complexities in avian cognition and behaviour.

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Auditory Communication - crucial for the evolution of unusual complexities in avian cognition and behaviour.

Dolphin Cognition and Behavior - R. J. Schusterman - 2013-04-15
Published in 1986, Dolphin Cognition and Behavior is a valuable contribution to the field of Cognitive Psychology.

Behaviour and Neurodynamics for Auditory Communication - Abteilung Vergleichende Neuriobiologie Gunter Ehret - 2006-04-20
Explains how arousal, motivation, emotion and behavioral contexts are vocally expressed and how important sound attributes are recognized and perceived.

Behaviour and Neurodynamics for
subjects falling under such physiology, and conservation biology, but all focus primarily on birds. Its authors, whether members of the National Academy or young investigators just beginning their careers, are leading authorities on their subjects, and its referees are selected for their knowledge and expertise in the topics covered by the chapters they are asked to review.

**Current Ornithology** - Val Nolan Jr. - 2013-11-11

Our purposes in this preface are, first, to reiterate our view of Current Ornithology's role; second, to describe briefly the contents of this volume; and third, to acknowledge the generous help of our Editorial Board and of the reviewers we have consulted about the contents of Volumes 13 and 14. As far as we know, Current Ornithology is the only English-language publication currently devoted exclusively to extensive reviews and syntheses of topics pertaining to all aspects of the biology of birds. Its chapters deal with diverse rubrics as ecology, evolution, behavior, phylogeny, behavioral ecology, anatomy and physiology, and conservation biology, but all focus primarily on birds. Its authors, whether members of the National Academy or young investigators just beginning their careers, are leading authorities on their subjects, and its referees are selected for their knowledge and expertise in the topics covered by the chapters they are asked to review.


This book is a practical guide for researchers and advanced graduate students in biology and biophysics who need a quantitative understanding of acoustical systems such as hearing, sound production, and vibration detection in animals at the physiological level. It begins with an introduction to physical acoustics, covering the fundamental concepts and showing how they can be
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