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# The Singing Life of Birds: The Art and Science of Listening to Birdsong

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Source: The Condor, 108(1) : 243-244

Published By: American Ornithological Society

URL: [https://doi.org/10.1650/0010-5422\(2006\)108\[0243:TSLOBT\]2](https://doi.org/10.1650/0010-5422(2006)108[0243:TSLOBT]2).

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## BOOK REVIEWS

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*The Condor* 108:243–248  
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**The Singing Life of Birds: The Art and Science of Listening to Birdsong.**—Donald Kroodsma. 2005. Houghton Mifflin Company, Boston and New York. 448 pp., 100 black-and-white illustrations. ISBN 0618405682. \$28.00 (cloth).

“How a bird acquires its songs, what songs are good for during daily activities, how they have evolved over millions of years and how they are controlled in the brain and in the dual voice boxes is what this book is all about,” says Donald Kroodsma, professor emeritus at the University of Massachusetts, in the introduction to his first book *The Singing Life of Birds: The Art and Science of Listening to Birdsong*. At first glance this seems an expansive goal, but on second thought these are the four questions proposed by Tinbergen that have driven behavioral research for years. Kroodsma uses them as a backbone for stories and anecdotes that he collected while recording and analyzing bird song for more than three decades. Here he draws from a collection of recordings from some 30 bird species, mainly from the North American continent. Some will be common and well known to all readers, such as the American Robin (*Turdus migratorius*) or the Black-capped Chickadee (*Poecile atricapillus*), others may seem exotic to the less knowledgeable birder, like the Three-wattled Bellbird (*Procnias tricarunculata*).

Research on bird song is abundant and so are the books written about it. Still, Kroodsma’s style is different. He gives a lively, often emotional account of his own experience which reads like an excerpt from his birding diary: “3:30 a.m. I’m out the door, knowing where to find him [a singing Hermit Thrush *Catharus guttatus*] at dawn, knowing that I must hear him firsthand to try to understand him better” (p. 256). Kroodsma gives an account of innumerable mornings spent outdoors waiting for the first bird to start singing. As soon as a bird starts, Kroodsma begins counting songs, keeping track of different song types a bird uses to get an estimate of the multitude and diversity within its song.

The book is accompanied by a CD containing soundtracks of some 98 recordings that are visually represented in high-quality sonograms throughout the book. Example songs are provided for each species along with black-and-white drawings of the species itself. Some may think that color pictures of the birds would be more illustrative, but I think this would draw attention from the sonograms, which really are the heart of the book. I recommend listening to a soundtrack while looking at the corresponding sonogram as suggested by Kroodsma. This will help to focus attention on some details in the song. The recorded tracks cover a wide spectrum

of bird sounds, for example the drumming sounds of woodpeckers, various calls of jays, the melodious song of the American Robin, and “bonk” sounds of the Three-wattled Bellbird—just to indicate some of the variety we can find in bird songs. One of my favorite recordings is the ‘solo duet’ of a Wood Thrush (*Hylocichla mustelina*, track 70) showing how a male uses the two sides of his syrinx, or as Kroodsma calls them, the two voice boxes. A recording of the author’s own daughter babbling is also included (without sonogram) for comparison to the “babbling” of a young male Bewick’s Wren (*Thyromanes bewickii*).

The book is organized in six sections, each consisting of a number of chapters and sample bird species. A large part of the book is based on research that the author has conducted himself or has been involved with, but other times he refers to studies by other researchers. The first section of the book gives the reader an introduction to methods of bird song investigation, including listening to the sounds in nature as well as visualizing recordings later in the lab. Kroodsma also puts bird songs into words: “Each song is a microcosm of musical contrasts, the bold, low-pitched whistled prelude so different from the softer, often high-pitched fluty flourish” (p. 246), and he uses common phrases to describe particular songs of birds such as “cheerily cheer-up cheerio” for the American Robin or “hey-sweetie” for the Black-capped Chickadee. This will probably have a greater appeal to the reader than when Kroodsma transcribes songs into numbers, keeping track of how many and which songs a bird produces in a certain amount of time.

The second section of the book focuses on the development of song: where, when, and from whom birds learn their songs. Here Kroodsma includes work by Peter Marler on different dialects in White-crowned Sparrows (*Zonotrichia leucophrys*) and Song Sparrows (*Melospiza melodia*), and how dialects may be related to the genetic constitution of a population. These accounts are not an exhaustive review of the scientific literature, but an excerpt of some milestone studies. More detailed references can often be found in the second appendix to the book, “Notes and Bibliography,” but it would help to have a reference to these comments in the text, rather than having to guess which statements will be supported by further information in the Notes section and having to search for them. In section two, Kroodsma also discusses song mimicry and why some species learn while others don’t.

The third section discusses in more detail the occurrence of dialects, and how and why songs vary

from place to place, using five North American songbird species as examples. The remaining three sections focus on extremes in bird song, including males without a song, males with very complex or elaborate songs, males singing at dawn, and an account of species in which the female also sings.

Overall, the book gives a nice overview of research on bird song, touching on many different areas and raising interesting questions. This book will be a good read for undergraduates who are considering field research, as they will enjoy the many cheerful statements from mornings out in the field and will be left with lots of enticing questions to answer. The birding enthusiast will be excited about accounts of rare observations and first-time recordings of some bird species. The scientific audience may wonder why they need yet another book on bird song but I recommend it as a fun read, particularly when using it interactively, looking at the sonograms while listening to the recordings on the CD. Scientists may get some inspiration from the recordings and may learn something new that increases their enjoyment of bird song in nature. The public audience who listens to birds singing in their backyard will be delighted by the insights that Kroodsma provides and by the encouragement to go out there, make some recordings themselves and learn to discriminate not only species but individuals within a species. Here the first Appendix will be useful as it gives an overview of recording techniques and computer software of the same types used in this book that allows analysis and manipulation of bird song. Following Kroodsma's example, one may end up spending many early hours in the field waiting for one particular bird to sing, be it Rob (an American Robin) or Woody (a Wood Thrush) or one of the many others.—ANGELIKA POESEL, Borror Laboratory of Bioacoustics, The Ohio State University, 1315 Kinnear Road, Columbus, OH 43212. E-mail: [Poesel.1@osu.edu](mailto:Poesel.1@osu.edu)