

The scientist's guide to summer reading

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Listening to a Continent Sing

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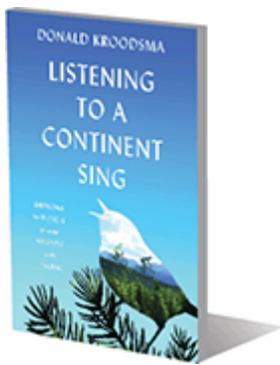
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Two bicycles, camping gear, and a shotgun microphone—this is what Donald Kroodsma, the illustrious ethologist, used to tune into nature's soundscape in 2003. Accompanied by his son, Kroodsma embarked on a trans-American cycling adventure, carefully documenting and decoding an incredibly diverse voice calling out across the country—birdsong—along the way. Blurring the lines between travelogue and casual scientific observation, *Listening to a Continent Sing* recounts their journey and transports the reader into the mind of a scientist renewing his awe of nature through an endearing portrayal of avian vocal communication and behavior.

Research using songbirds has undergone tremendous growth since its beginnings in ornithology, becoming a preeminent model for studying the neural, genetic, and behavioral underpinnings of

vocal learning, development, and communication. Songbirds learn their vocalizations from conspecifics, vary them depending on who is listening, and use fine acoustic differences in song to recognize other individuals and make social decisions. Although this book does not go into scientific depth on these topics, the author's anthropomorphic portrayal of bird behavior renders avian ethology accessible to a larger audience.

Over the course of their 71 days of travel, Kroodsma acts as a cross-species translator. He tells us what changes in tone, pitch, vibrato, and song repetition mean in birdsong: from barred owls serenading each other in Virginia to a western tanager signaling dawn in the Grand Tetons. He draws connections between geographical changes in human accents and within-species dialects demonstrated by birds like the dickcissel. He also performs a number of spontaneous scientific observations: counting which songs a mockingbird imitates to deduce its favorites or wondering why female blackbirds risk giving away their nest location just to vocalize.



Raising the topic of animal intelligence, Kroodsma contrasts his own navigational troubles on the road with the remarkable sense of direction demonstrated by purple martins that migrate from Brazil to the United States and back each year. Scattered with illustrations of bird species and QR codes that link to sound samples, the book offers both a visual and auditory exploration of the fascinating avian world.

During his journey across the United States, the author also finds himself on a metaphorical road of self-reflection. His tranquil admiration of fauna, flora, and human characters met along the way (many just as colorful as the birds) conveys a mindful appreciation for life in all its forms. He leaps from descriptions of Civil War battlefields and the Louisiana Purchase to daydreams of Pangea to the Pleistocene ice age, all the while contemplating the immense evolutionary tree that links all living species back to common ancestors.

In its refreshing mix of history, linguistics, biology, and ethology, *Listening to a Continent Sing* brings back the joy and enthusiasm for scientific pursuits that can sometimes wane with time. Kroodsma reminds the reader that science goes beyond the pressure to produce significant results and publications. It is a lifestyle filled with curiosity, fascination, and appreciation for the world we live in. And for anyone hoping to do the same, he provides concise advice: “[T]he more I listened the more I heard.”

<http://science.sciencemag.org/content/352/6290/1166.full>