

Professors seeks to understand why birds sing

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A better understanding of why birds sing has led David Rothenberg, PhD, a professor in the department of humanities at New Jersey Institute of Technology (NJIT), on a journey into the seemingly disparate worlds of science, poetry and music. The result is the publication this month of *Why Birds Sing* (Basic Books).

"My book is the first introduction to the world of bird song to combine science, music and poetry to make sense of why birds sing," Rothenberg said.

The book's idea originated with Rothenberg's experiences in 2000 when playing his clarinet along with birds in the National Aviary in Pittsburgh. To his surprise, one bird, a white-crested laughing thrush, responded to his music much more than he had expected. Soon, Rothenberg wanted to know why birds behaved the way they did. He embarked on a journey which led him from ancient writings to the cutting edge of neuroscience,

Why Birds Sing makes good use of Rothenberg's experience teaching courses in science, technology, and society at NJIT. These courses gave him a unique window on which to view his subject. For example, in the 19th century, poets were more accurate than scientists in noting down the rhythms of bird songs. Later, though, in the 20th century, sound recording and computers revolutionized the ability of researchers to print out bird songs and scrutinize the sounds on paper. For Rothenberg, thanks to his unusual teaching and research background, both these facts made sense and indeed were incorporated into the book.

More unusual tidbits abound. The text highlights a 200-page book about a three-note bird song, written in the 1940s. He details a bird that picks up African bird songs on its migratory route . Later this crooner sings the African tunes in the marshes of Europe when it returns in summer.

Examining the field of neuroscience, Rothenberg explains how researchers have discovered that when a canary learns a new song, new neurons appear in his brain.

So why do birds sing. "Because they can and because they must," said Rothenberg. "Songs are used to attract mates and defend territories, but the form is much more than function. Nature is full of beauty, and of music."

David Rothenberg is the author of *Sudden Music: Improvisation, Art, Nature* (University of Georgia Press, 2001) *Blue Cliff Record: Zen Echoes* (Coddhill Press, New Paltz, NY, 2001), *Hand's End: Technology and the Limits of Nature* (University of California Press, Berkeley, 1993), *Is It Painful to Think? Conversations with Arne Naess* (University Press, University of Minnesota, 1992), and *Always the Mountains* (University of Georgia Press, 2002).

Rothenberg edited *The Book of Music and Nature* (Wesleyan University Press, 2001), and *Parliament of Minds* (SUNY Press, 1999) interviews with leading philosophers in conjunction with a public broadcasting television series of the same name, of which he was a co-producer.

Rothenberg is the editor of the *Terra Nova* book series, published by MIT Press, presenting environmental issues as culture, not only policy. His own writing has been anthologized in *The Best Spiritual Writing 1999* edited by Philip Zaleski (Harper San Francisco) and *The Soul of Nature: Visions of a Living Earth* by M Tobias. His articles have appeared in *Parabola*, *Orion*, *The Nation*, *Wired*, and other publications.

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