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E. O. Wilson studying ant behaviour in 1975.

CAREERS

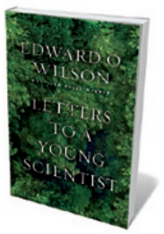
A guide to the life scientific

Stuart Pimm applauds eminent biologist E. O. Wilson's pragmatic and passionate career advice.

My mind races through possible conversations as I see my phone call is from E. O. Wilson. Pulitzer Prize winner, author of *Sociobiology*, laureate of the top international prizes for environmental sciences, widely acknowledged as one of the great scientists of our age, emeritus professor still mounting incisive attacks on those who challenge his ideas on evolution: what could he want to discuss with me? "Ants" I told myself quickly, organisms about which I know nothing. He did not disappoint, grilling me about my experiences in the Hawaiian islands, where ecosystems assembled without ants.

I expected *Letters to a Young Scientist* to be about ants, too. It is. Ants appear every few pages in its 21 short chapters. Advice flows as Wilson identifies them, hunts down rare and evolutionarily special ones from Sri Lanka to the Australian outback, and makes his lab smell by putting chemicals on their bodies that trigger their ejection from nests as dead, even when they are not. They are the focus of global explorations and innumerable simple experiments.

In this fund of practical and philosophical guidance distilled from seven decades of experience, Wilson provides exactly the right mentoring for scientists of all disciplines — and all ages. This is a very personal story, from boyhood Scout camp in Alabama to Harvard University, replete with autobiographical details, stories of the famous, the eccentric (and usually both), of success and, far more often, of failure and frustration.



Letters to a Young Scientist
EDWARD O. WILSON
Liveright/W. W. Norton: 2013. 242 pp. $21.95/£15.99

Wilson takes on that "great bugbear for many would-be scientists" — mathematics — in Chapter 2. He grants that some disciplines require exceptional fluency, but warns that a strong mathematical background does not guarantee success. He conjures a field of dreams. Build engaging ideas and the mathematicians will come. "For every scientist … there exists a discipline of science for which that level of mathematical competence is enough to achieve excellence," Wilson posits as a principle.

Nor is exceptional IQ essential. He writes: "let me suggest … that many of the IQ brightest join … MENSA and work as auditors and tax consultants." Yes, it helps to be smart, but one can have too much of a good thing. Wilson thinks that those who are too smart don't have to sweat to do science as students, something that he and I agree is necessary to build the requisite character.

There are admonitions for later stages in careers. "Avoid department-level administration." "Make excuses, dodge, plead, trade." "Spend extra time with students who show talent and interest in your field of research." "Consider carefully job offers that include fewer … administrative responsibilities." This book will quickly be on the *Index Librorum Prohibitorum* of college deans.

Wilson sees daydreaming as a key exercise for success, and suggests: "Make talking to yourself silently a relaxing pastime." My personal experience suggests that silence is not an essential ingredient of that recipe, although my wife would appreciate it if it were. He also urges his putative young scientist to explore. He won the coveted Explorers Club Medal, despite never venturing to the poles or making first contact with an Amazonian tribe. But his exploring for biodiversity has made many aware that scientific frontiers are all around us.

Can creativity be engineered? Wilson visits the Santa Fe Institute in New Mexico, where personal office space is deemed distasteful, and Google's headquarters in Mountain View, California. When I visited, I tried not to overindulge in *ad libitum* soft drinks, coffee and nuts. And I still haven't got over the advice on writing better computer code pasted above the men's urinal. These places impress Wilson too. Nonetheless, he believes that the creative process "arises and for a while generates in a solitary brain".

"You will make mistakes. Try not to make big ones," he concludes. Amen to that. Yet Wilson begins the book with the most important advice of all: "enduring passion will never fail you." It hasn't failed him.

This is no pompous, deeply philosophical treatise on how great ideas develop. Wilson shares his simple love for ants and their natural history, revelling in them without hesitation. Everything else follows. ■

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