The Sting of the Wild
Justin O. Schmidt
2016; 280 pages, 13 color plates
Johns Hopkins University Press,
Baltimore, MD
$24.95 (hardcover)

If you decide to make a list of the stinging insects to most carefully avoid on Earth, The Sting of the Wild is the perfect guide. This book is an entertaining tale of Justin Schmidt’s lifelong research that will incontestably spark the interest of all entomologists. The book provides interesting ecological and behavioral information on a broad array of stinging insects (that is, wasps, hornets, bees, and ants) examined in an evolutionary context. Why do some hymenoptera venoms hurt and some others do not? Why is the bullet ant considered to have the most painful sting among insects? And why is the venom of the Maricopa harvester ant the most toxic for vertebrates? Through the author’s own experience, the book discusses the relationship between hymenoptera and vertebrates, particularly humans. Schmidt explains how the evolution of a sting as well as pain-inducing venom has been critical to the rise of sociality among hymenoptera.

Justin Schmidt is an American entomologist based at the University of Arizona who is interested in venom biochemistry and the pain induced by insect stings. He pioneered the study of hymenoptera venoms with the first descriptions of their composition and physiological effects, as well as a description of some venom toxins. He is also famous in the scientific community for having created the Schmidt sting pain index, in which various insects are ranked according to the pain induced by their sting. The pain index is based on his personal experience with insect stings. Throughout his numerous travels and field studies, Justin Schmidt has been stung, more or less deliberately, more than 1,000 times. Along with a list of species, their geographical distribution, and the pain level related to their stings, Schmidt’s pain index provides an accurate, florid, and imaginative description of the pain caused by each species. Species are ranked from 0 to 4: painless insect stings are rated at 0, while the most painful top the scale at 4. Schmidt’s curious field of study and unusual methods led him to be awarded an Ig Nobel Prize in 2015 in honor of his improbable research.

The Sting of the Wild is part biography, part scientific book, in which the author shares his personal experience and expertise on insect venoms with readers. Although the book is sometimes a bit repetitive, it is highly readable and filled with fascinating anecdotes. Readers travel all around the world with Justin Schmidt, from the Costa Rican rainforest to the Arizonian desert, to encounter the creatures that most people usually attempt to avoid.

The book is divided into eleven chapters. The first five chapters are introductory, with general statements on insects, stinger anatomy, evolution, and pain. The chapters that follow focus on several conspicuous and interesting stinging species, including as honey bees, the bullet ant, and yellow jackets, and contain valuable information and amusing stories. Throughout these chapters, we learn how the author encountered each species, the origin of the species’ names, the astonishing life history of these creatures, a description of the pain caused by their stings, and their ecological relevance. Even though very little is known about the composition of insect venoms, Schmidt provides some details on their chemical components. For instance, Schmidt describes the sting of the bullet ant as “pure, intense, brilliant pain. Like walking over flaming charcoal with a 3-inch nail embedded in your heel.” He explains how he has injected under his own skin a “tiny amount of synthetic poneratoxin” in order to check if this toxin was the pain-inducing toxin of the venom. We can also appreciate the beauty and variety of the insects that are mentioned in the book through several photographs presented in a central section. The book concludes with the complete Schmidt pain index for 83 species of stinging insects and the list of references used in the book.

You don’t need to have been stung by a lot of ants or any other insects to appreciate this book. The Sting of the Wild sheds light on the mysteries of stinging insects in a delightful and humorous narration. I recommend the book to every entomologist, ecologist, and naturalist interested in exploring the impressive world of Hymenoptera.

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DOI:10.1093/ae/tmw087