



Tales from the Ant World

Edward O. Wilson

Book Review by Stephen L. Doggett

When the name Edward O. Wilson (more commonly known as ‘E.O. Wilson’) is mentioned in a roomful of biologists, there will be a reverential pause to acknowledge the great man. Not only is E.O. Wilson the greatest living ecologist, he is arguably the greatest ever Myrmecologist, namely one who studies ants. He has published more than 430 scientific papers, some being amongst the most cited publications in history. His mass of works includes 35 books, two of which have won the prestigious Pulitzer Prize. E.O. Wilson is often dubbed “*The New Darwin*” for his work on evolutionary theory, which has often been marred by controversy, yet is always thought provoking. Thus when a new book is released by E.O. Wilson, it sends a shiver of excitement through the biological community.

His latest work is titled, “*Tales from the Ant World*”. In this book, E.O. Wilson provides a personal account of many of his amazing encounters with ants from around the world, covering some of his early experiences while growing up in the US, to more recent times. In the process he focuses on some 25 different but extraordinary ant species.

Having actively researched ants for almost 80 years, it is no surprise that “*Tales from the Ant World*” contains some fascinating anecdotes. One of his first forays into the ant world was when he was 14 and collecting insects in the backyard of this home in Alabama. E.O. Wilson describes finding an ant nest “in the form of a mound a

foot high, teaming with ants of a kind never seen anywhere else.” The species proved to be the red imported fire ant, *Solenopsis invicta*, and this was the first record of the species in the USA, and in the entire northern hemisphere. Interestingly, E.O. Wilson notes that the species name ‘*invicta*’, means unconquered, which helps to highlight that this species is extraordinarily difficult to control and why they are considered the most invasive organism of all time. In fact the ants quickly spread to other parts of the US, onto Hawaii and to other nations.

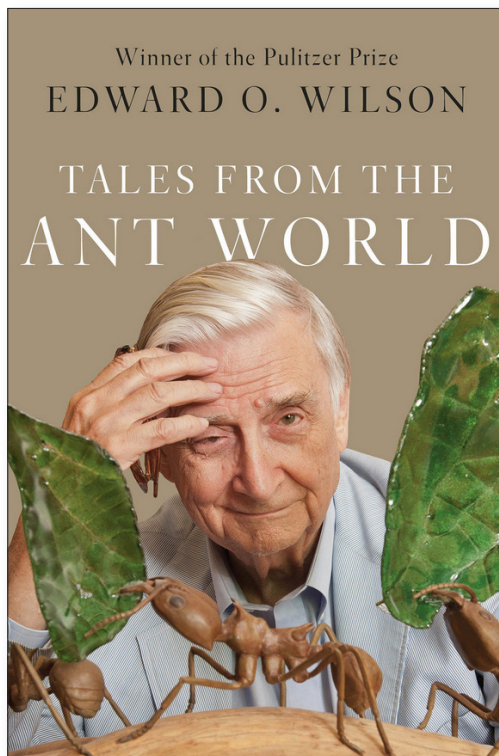
In consequence of the spread of fire ants in the 1950s, the US Department of Agriculture introduced a policy whereby they wanted to eliminate the species through mass spraying with organochlorine insecticides. This was in spite of a lack of knowledge of the ant biology and what the consequences of the mass spraying would be. While many ant colonies did die, there was mass environmental destruction and E.O. Wilson recalls how the wildlife was decimated, yet overall the ants were not eliminated. This was an early example of how non-targeted pest control can have devastating outcomes, which E.O. Wilson calls, “*The Vietnam of Entomology*”, highlighting the parallels to the US of the herbicide Agent Orange during the Vietnam War.

As a true scientist, E.O. Wilson wondered why they were called ‘fire ants’. He had been stung a number of times previously but considered the pain local and temporary. Then one day he was

with a film crew in the field, and without too much thought, stuck his hand into the nest. The outcome was more than fifty stings, which he states, “the pain was immediate and unbearable... it was though I poured kerosene in my hand and lit it”. He never did this again!

[I will admit us scientists can do some dumb things, like when I was 22, I stuck my arm in cage of around 2,000 mosquitoes to see what it felt like – I had a bright red arm for eight weeks and no sleep for several days due to the intense itching. The mixture of youth and science can be deadly!]

It is easy to see how Wilson won two Pulitzer Prizes, as his writing is so descriptive, easy to read, and simply beautiful. I just love this description of army ants, “The colony poured out of a hidden bivouac... a horde the size of a dozen Roman legions, forming a line three or four abreast”. The image conjured is of an invading army that obliterates everything in its path, which pretty much describes what army ants do. Similar to human armies, are the followers that come after the invading legions have plundered the conquered land. In the case of army ants, these include small beetles and silverfish that scrounge the food left behind but evade the jaws of the ants. Furthermore, there is a tiny beetle, which are amongst the smallest beetles on the planet, which jump from ant to ant, much like fleas do, and lick oily secretions from the body of the army ants. For some unexplained reason, the ants do not seem to care. There are also mites on the ants that are carried on the jaws of the ant, another mite that attaches permanently to the foot where it feeds on the blood of the ant, and a type of beetle that rides the ants like a jockey on a horse. What an extraordinarily complex world we live in! E.O. Wilson has helped bring the world of the miniature and normally unseen, to all of us.



Did you know that there are ants that walk under water to collect the dead bodies of drowned insects? There are ants that glide from tree to tree much like flying squirrels. A certain ant can slam its jaws shut so fast, it is the fastest moving feat in the animal world. There are suicidal soldiers whose abdomen explode in defence of the colony spraying chemical onto predators. Some ant colonies unite forming super colonies tens of kilometres wide. Some ant species invade the nests of other ants, capturing pupa and the emerging adults become slaves. The queen from one species in Africa can lay a whopping 86,400 eggs in a day! These are just a few of the amazing stories featured in *Tales from the Ant World*.

We are often taught in pest management that to be proficient at controlling a pest, we need to understand its biology. The more we can learn on biology, the easier

it becomes to succeed in difficult challenges, and the better we develop as a pest manager. At the same time, the more we learn, the greater we can appreciate the world around us. There is no question in reading *Tales from the Ant World*, you will learn many amazing facts about the life of ants, yet this book will appeal to anyone with a love of natural history. I can thoroughly recommend this wonderful new offering from the legendary ecologist.

Tales from the Ant World is 227 pages, published by Liveright, and available from Amazon for USD\$17.24. ISBN: 978-1-63149-556-4. ■

Stephen L. Doggett is the Director, Department of Medical Entomology, NSW Health Pathology (ICPMR), and the Chief Editor of the FAOPMA Magazine, Westmead Hospital, WESTMEAD NSW 2145, Australia.

Email: Stephen.Doggett@health.nsw.gov.au