

# The Secret Life of Flies

Erica McAlister

Book review by Stephen L. Doggett

**I**n the last issue of the FAOPMA Magazine, the editors reviewed a series of new book releases from the world of pest control. In upcoming issues, we also intend to review some of the past classics. These are iconic books that will either greatly enhance your knowledge (which will ultimately improve your ability as a pest manager) or books that are of general interest that somehow relate to the industry. The first in the series of classic reviews is an astounding example of the latter, a superb book that focuses on flies, yet is still a relatively recent publication.

*The Secret Life of Flies* was released in 2017 and is the work of Erica McAlister who is the curator of Diptera (flies) at the Natural History Museum in London. Her love for these insects began at an early age and even admits that as a child she enjoyed watching maggots in a decomposing animal. With this sort of morbid fascination, it was inevitable that Erica was to become an entomologist! Her love of flies is very evident in *The Secret Life of Flies*. The figures, facts, and stories that Erica recounts, shows that she not only likes these insects, but is obsessed by them.

Sadly, as Erica points out, most insects tend to be ignored and it is only when these insects directly affect humans do we take any notice of them. And the reality is that flies are incredibly important to us. For example, the humble vinegar fly, *Drosophila melanogaster*, is the most widely used genetic model in existence. This species shares share around 75% of its disease-causing genes with humans, and thus it has become a perfect model for the impacts of drugs and various inheritable diseases.

It is noted in the text that flies have a huge economic benefit to us. According to Erica the economic worth of pollinators equates to around £120million (USD\$160million). Flies form a large component of this and are the main pollinator for many crops.

**Flies...most important role is in the fertilization of *Theobroma cacao*...**

Arguably however, their most important role is in the fertilization of the flowers of *Theobroma cacao*. You may recognise the species name, this is the cocoa tree from which that most important commodity is derived, chocolate. A small type of fly called a 'biting midge' from the family, Ceratopogonidae is crucial for the reproduction of this plant. Many biting midges are serious pests and are extremely aggressive biters. For example, in some parts of the north coast of NSW, Australia, real estate agents will only take prospective buyers to certain properties in the middle of the day, for they know that the swarm of biting flies that descend at dusk will send buyers running. Thus a lot of chemicals are applied to reduce biting midges numbers around the world, and if this is done to control the species that fertilises cocoa plants, then the global chocolate production becomes endangered. For me, (who just had a delicious hot chocolate while writing this review), such an outcome would be disastrous. Interestingly, Erica McAlister writes that she absolutely hates chocolate;

there must be something seriously wrong with this lady!!!

*The Secret Life of Flies* is full of fascinating quips and stories, and those anecdotes above are just a few of the many and varied examples on offer. The book is divided up into ten chapters and each is devoted to a theme, largely focusing on the diet of the particular flies under discussion. However, the first chapter focuses on the juvenile stages, namely the egg and the delightful maggot. After this there is a chapter of the pollinators, followed by those species that live in the dirt and decaying world around this. This is followed by the coprophages, i.e. those that eat...poo. Chapters then include flies that live in bodies, those that exist on plants and fungi, the predators, the parasites of other creatures, and finally the blood feeders.

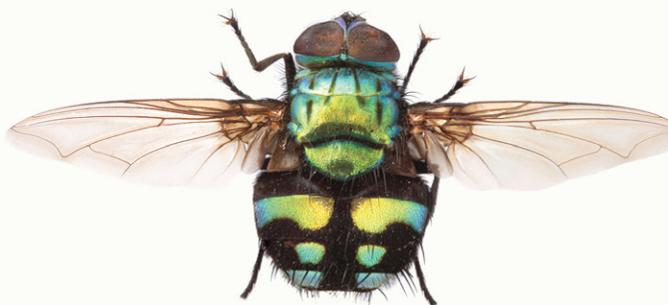
Naturally in any review, critical commentary is always expected. Yet the truth of it is that it is hard to be negative about *The Secret Life of Flies*. Perhaps I would have liked to see some more images, as there are so many great shots of flies on the internet, especially with the mosquitoes. However, the photographs that are there are still very good. My only real complaint was the statement on page 213 that, "...many of the flies that suck blood...act as vectors...of some pretty nasty diseases." As a founding member of the Society for Keeping Entomological Entries True (SKEET), I do take a slight umbrage at this statement. The reality is that of those flies that do suck blood (which is almost all the mosquitoes, except for the magnificent *Toxorhynchites*), very few transmit pathogens of concern and in fact only around 1-5% of mosquitoes are either pests that bites us or are vectors. Most species are harmless and play an important role in the web of life such as fertilising plants or are food for other species. Thus statements that suggest most biting flies are bad is just Fake News (never thought I would quote Donald Trump, I should also note that I am the founder and sole member of

SKEET!).

Silliness aside, most of all Erica is a communicator and a superb orator of the written language. In fact you could say that her lyrical words are music to the mind! She uses wit in a way that is humorous, but never over the top. There is no question that Erica's heart and soul went into writing this book and result is one of the most fascinating and easy to read entomological texts available today, and I can thoroughly recommend this terrific tome. ■

*The Secret Life of Flies* is published by the Natural History Museum, London, and available from major book stores (\$USD16.17 from Amazon). COI Statement: one image of mine is published in this book, with no commercial benefits received.

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