

## Book Review

# Sentinel Chickens: what birds tell us about our health and the world

**PETER DOHERTY**

*Melbourne University Press, 2012. 231 pages with index, chapter notes and bibliographical references. A\$29.99.*

Peter Doherty is an eminent Australian scientist and the co-recipient of the 1996 Nobel Prize for Physiology and Medicine for his research work on 'How the human immune system can distinguish between infected and non-infected cells'. This book is his latest offering in the field of popular science and as such is an excellent addition to the bedtime reading list for ornithologists and twitchers to sleep on before the early morning start.

What the book does not do is to identify where your next 'tick' could be found but it does fill the mind with insights into the way the world of viruses infect birds and how viruses may in turn pass to humans via various vectors. This is meaty stuff to contemplate as the insect world attacks the lone bird watcher wading through mosquito-populated swamps and early morning mists. As people interested in the ornithological sciences, bird watchers will almost certainly already be aware that the health of individual bird species can be a vital indicator of how well humans are travelling in a world where our own predatory species is pervasively dominating the natural environment.

Leavened by first hand accounts of those luminaries who have made their lifelong work

the pursuit of knowledge, Dr Doherty's text takes us along research paths that reveal how birds help us to identify viruses that can only be seen by an electron microscope. He shows how this leads to the development of vaccines for many of the repeated attacks on the human population by influenza, malaria and cancer. It is salutary to contemplate that the great Spanish Flu virus H1N1 pandemic of 1918-1919 killed upwards of 100 million people (including my paternal great-grandmother) and infected some 25% of the total human population.

You will need to be prepared to learn something of the language of the virologist, but Dr Doherty is a master at drawing the reader into his world of the West Nile Virus (WNV), Murray Valley encephalitis (MVE) and many other acronyms. It is not long before the roaming birder is looking out for the caged groups of 'Sentinel Chickens' doing duty for the good of human-kind. The chickens are there to be infected by mosquitoes and regularly have blood samples taken for analysis for virus. In this way the spread of RRV (Ross River Virus) can be tracked.

It is perhaps not surprising that a huge body of research on the diseases of birds can be traced

back to the poultry industry. Anyone who has had even a passing interest in keeping chickens knows that without much of a warning the whole flock can be decimated by a mysterious illness.

After reading this book, I was left with Doherty's concluding message that we had better take the health of the natural environment really seriously since the decline and loss of bird species could well be an indication that our own existence is in peril.

I suggest that before starting a serious reading of the text in this book the reader identify the 25 pages of chapter notes towards the end of the book. I did not come across these until I had finished reading the main text with all its most interesting and sometimes challenging excursions into the world of laboratory science. Pity that the existence of these notes is not indicated anywhere in the main text.

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