

## BOOK REVIEW

### Cane toads – A tale of sugar, politics and flawed science

Nigel Turvey (2013)

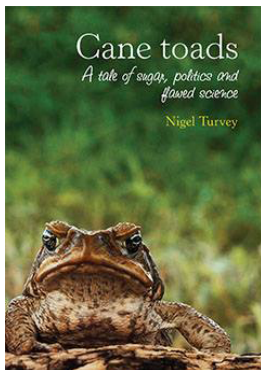
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Nigel Turvey is an environmental scientist, professional forester, businessman and writer. He is currently Adjunct Professorial Fellow at Charles Darwin University. He is also an extremely entertaining writer who has the capacity to turn what could be a relatively dry subject in scientific history into a truly interesting read. Cane Toads is a fascinating book, which covers an often debated and discussed topic – the introduction of cane toads into Australia for the control of cane beetle. As a biological control practitioner, whenever I give a talk about my work one of the first questions to be asked is usually “how do you know it won’t become another cane toad”. My stock answer is that we have greater safety nets in place now compared to 1935 with the introduction of more extensive host-specificity testing, so together with other current protocols the risks of it happening are greatly reduced. Nigel Turvey immediately humbles this thought with his observation that “although today we have the best scientists on the job, the best scientists were also at work back then. It is simply wrong to think that we are qualitatively different today”. It is true that we would never consider the introduction of an omnivorous species such as the cane toad as a biological control agent today but it is nevertheless a salutary lesson.

The cane toad was released into Australian cane fields near Gordonvale in 1935 under the mistaken premise that because the toads ate cane beetles they would control populations in the field. This is the flawed science referred to in the title of the book. That they were released at all is due to the support (pressure) from cane growers and political leaders including Queensland’s premier Bill Forgan-Smith, and the prime minister of Australia, Joseph Lyons. Unfortunately, we seem to have learnt little from this mistake, as even today politics continues to meddle in, and often overrule, scientific opinion. Only a lone voice objected to the release of the toad. Walter Wilson Froggatt, the retired New South Wales chief entomologist and former President of the Linnaean Society of New South Wales, argued against the release stating that “This great toad, immune from enemies, omnivorous in its habits, and breeding all the year round, may become as great a pest as the rabbit or cactus”. He was obviously outgunned by the other heavyweights of the time who had a vested interest in the release of the toad. On reflection, it is truly a pity they did not listen to him at the time. However, even Froggatt’s argument was flawed. He was worried about the consequences of what the toads would eat but did not seem to appreciate the consequences for Australian fauna that tried to make a meal of the toads. It wasn’t until 1975, 40 years after the toad’s release, that the first survey of the impact of cane toads on Australian fauna was done. In the nearly 80 years since their release they have spread as far as Kakadu National Park and Western Australia’s Kimberley Region and have become one of the most invasive pest species in Australia: poisoning native animals, outcompeting native frogs and causing major disruptions to sensitive ecosystems. Their advance appears to continue unchecked at present.

Cane Toads is a must read for any biological control worker, entomologist or person interested in natural history. It is also recommended for anyone interested in a truly important piece of Australian history.



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