

Corrections and Addendum for *Treatment-Free Beekeeping* by David Heaf, 2021

Corrections and additions

- Page 2, after (c) symbol: Insert '2021'.
Page 6 after 'Acknowledgements....113' insert 'Addendum....113'
Page 9, 3rd line from bottom: Replace 'be health' with 'bee health'.
Page 18, 2nd para, 5th line: Replace 'he authors' with 'the authors'.
Page 32, 4th line down: Replace 'chapter 9' with 'Chapter 8'.
Page 33, after end 2nd para, after the string 'culling.': Insert '(See also Addendum, page 113)'
Page 42, after end 2nd para, after note superscript 94: Insert '(See also Addendum, page 113)'
Page 50, 8th line down: Replace 'Chapter 9' with 'Chapter 8'.
Page 53, 5th line down: Replace 'at least hint of what' with 'at least a hint of what' (i.e. insert missing 'a').
Page 68, 6th line down: Replace '10%' with '14%'.
Page 87, last para, 4th line: Replace 'fund' with 'found'.
Page 91, penultimate line: Replace 'are be' with 'are' (i.e. delete 'be')
Page 98, Fig. 29 caption: Replace 'in a in a' with 'in a' (i.e. delete second 'in a')
Page 102, 2nd para, 2nd line: Insert 'deep' after 'format'.
Page 106, 3rd line: Replace 'This is the a way' with 'This is the way' (i.e. delete unnecessary 'a')
Page 117, After 'Ibbertson, J. & C.' insert '65' (i.e. missing page number)

On page 113 add the following Addendum title and text after the Acknowledgements paragraph:

Addendum

Page 27:

In winter 2020/2021, I wintered 9 colonies and 9 survived. This brings my overall losses down to 15%, and down to only 7.8% since 2011.

Pages 33 and 40-42:

Shortly after the first printing of this book, a research paper was published which casts doubt on both the 'mite bombs' and 'robber lures' hypotheses. The authors established a mite donor apiary containing two high mite colonies and two low mite colonies, plus eight mite receiver apiaries situated at 0.8 or 1.6 km from the donor apiary, each with four colonies, all equalised in strength and with low mite counts to start off with. Half of the receiver colonies were fitted with robbing screens to keep out non-natal bees, i.e. those bees not born in the colony in question. 4,000 bees in each donor colony were marked with paint; red for high mite donor colonies and blue for low. Over a period of 47 days, September to November, marked bees entering receiver colonies were detected with camera sensors.

The authors concluded that the 'results do not support the current two leading theories regarding mite immigration -- the “mite bomb” theory (bees from high mite colonies emigrating to collapsing colonies), or the “robbing” theory (natal robbing bees return home with mites from collapsing colonies). Rather they argued that a colony’s permissiveness, i.e. letting in non-natal bees, predicts the rate of mite growth a colony will experience, and they linked permissiveness to the practice of breeding gentler bees. The remedy they suggested for those worried about mite influx from visiting bees is to fit a robber screen.

The full open access paper by Kelly Kulhanek, Andrew Garavito and Dennis vanEngelsdorp entitled 'Accelerated Varroa destructor population growth in honey bee (*Apis mellifera*) colonies is associated with visitation from non-natal bees' (Scientific Reports (2021) 11:7092) is available at

<https://doi.org/10.1038/s41598-021-86558-8> .