Preface

Nienke Hartemink¹

Published online: 23 December 2015
© Springer International Publishing Switzerland 2015

My interest in the eco-epidemiology of tick-borne pathogens was triggered when I, trained as a mathematical biologist and epidemiologist, got the opportunity to work with tick expert Prof. Sarah Randolph (University of Oxford, UK) during my Ph.D. period, in 2005–2009. Within the framework of EDEN, a large European research project on vector-borne diseases (<http://www.eden-fp6project.net/>), Sarah Randolph was leader of the team working on tick-borne diseases, and I worked in the mathematical modelling team of Prof. Hans Heesterbeek (Utrecht University, The Netherlands). Together, we developed a matrix model for the derivation of the basic reproduction number R_0 for tick-borne diseases (Hartemink et al. 2008), based on Sarah Randolph's knowledge of the life cycle of ticks, the interactions between ticks and hosts, and the implications for the transmission of tick-borne pathogens. After completing my Ph.D. thesis on R_0 models for tick-borne and other vector-borne diseases, I worked as a postdoc in EDENext, the follow-up project of EDEN (<http://www.edenext.eu/>). The EDENext tick-borne diseases group, led by Prof. Annapoala Rizzoli (Fondazione Edmund Mach, S. Michele all' Adige, Italy), focused in particular on Crimean-Congo haemorrhagic fever (CCHF) and newly emerging diseases, mainly borne by *Ixodes ricinus*, caused by a diversity of bacteria and parasites.

When Prof. Maurice (Maus) Sabelis contacted me in the summer of 2014 with an invitation to compose a special issue of *Experimental and Applied Acarology*, I proposed to make emerging tick-borne pathogens in Europe the theme for this issue. Even though I was not directly involved in the work of the tick-borne pathogen team in EDENext, I knew that a lot of new research results on this topic would be available. Maus was enthusiastic about the idea and we started to invite authors to contribute to the special issue in autumn. I asked the EDENext community for contributions, but also included research that was not performed within this framework, so that the issue now presents a wide variety of studies,

✉ Nienke Hartemink
n.a.hartemink@uva.nl

¹ Theoretical Ecology Group, Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam, 1098 XH Amsterdam, The Netherlands

including field work, modelling studies and review papers, all highlighting different aspects of the emergence of tick-borne pathogens. Five out of the eight papers in this issue are funded by EDENext, and two of the other papers have at least one co-author that was involved in EDENext (Silaghi et al.) or in EDEN (Capligina et al.). Louping ill is not studied within the EDENext framework, therefore I invited Dr. Lucy Gilbert (The James Hutton Institute, Aberdeen, UK) to contribute with a review paper on trends and developments in the research on this particular pathogen.

I would like to thank Jan Bruin for all his help; his advice and support were vital in the preparation of this special issue. Also many thanks to Prof. Willem Takken, with whom I prepared the introductory chapter, and to all the authors who contributed to this issue.

Unfortunately, Maus' illness did not allow him to see the end result, as he passed away in January 2015. This special issue is therefore dedicated to the memory of Maus Sabelis (1950–2015).