University of Groningen

The battle between bioturbation and biocompaction
Howison, Ruth Alison

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2016

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Copyright
Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.
Acknowledgements
"The thesis is done! All chapters submitted. Looking back 4 yrs flew by in a flash. There were way more ups than downs. Many awesome people made it possible, thank you. ... The "little book", defense and party to follow." These were the thoughts I shared on my social media the day my thesis was shipped off to the examiners. With 121 congratulatory responses, I think this was the most attention an update received from my network of contacts! This has been one of the most adventurous journeys that I have had the pleasure of sharing with many people and here I have the opportunity to thank them.

Firstly, Chris Smit and Han Off my supervisors, thank you for all of your advice and guidance. Han, we met in Hluhluwe-iMfolozi Park when I was studying my bachelors through a correspondence university (by night) and performing the tasks of an unusual administrator (by day). The administrative tasks were less fun than the fantastic opportunities to get out into the field assisting with many research programmes ranging from vegetation mapping, predator reintroductions and tracking, black rhino resightings, aerial counts and digitalizing the spatial records archived at the research station. You started the program Savanna Biodiversity Research and gave me the opportunity to work with many unforgettable people who travelled from the Netherlands to study the great African savanna. Once my bachelor studies were complete you employed me as the data manager of this program with an unusual requirement I had to sign myself up for a Masters degree in ecology (again filling many nocturnal hours). At this point Owen and I started our family where mixing work, studies and tiny girls into every day was challenging. However, your commitment to motivate me to finish these studies was instrumental in starting this PhD. I remember many skype meetings where you would patiently explain (again) some complicated statistical analysis and I would try to furiously record every menu choice in Statistica – only to spend the next few hours rerunning the analysis (because I missed a few clicks here and there) until I could reproduce the analysis. Well I can say this was truly influential in my somewhat deeper fascination with statistics. Throughout my PhD you have offered me great support and inspiration, thanks for making science fun and for always having a better idea of my trajectory than me!

Chris, with your new position at RuG came the opportunity to offer a lucky candidate a very exciting PhD. You decided to give that opportunity to me. This involved the migration of me and my family to the Netherlands and the start of this great adventure. We developed an exciting plan of salt marshes, plant interactions and stress gradients and were set to go.... With one small trip to South Africa to introduce you to the savanna, me along as an expert guide, suddenly the African savanna was inserted into our plan. A somewhat major rethink of how this would all pan out resulted in our conceptual paper and a global perspective (since I flatly refused to write another introductory essay!) Your incredible patience with my often wild ideas and your stubbornness to make me plan the feasibility, take cognisance of time and write it all down were essential in the conversion from part-time to full-time scientist. I have learned a great deal from you and I look forward to continuing working together.
Matty Berg thanks for your advice in Africa while we set up different projects to study natural infrastructure and patch reversal mechanisms. Thanks especially for asking all the thought provoking questions that helped us to evaluate plan A, plan B, plan C and finally settling down on plan A1. Johan van de Koppel thanks for patiently teaching me the important differences between a water infiltration feedback and a scale dependent feedback. Thank you especially for your valuable input in the conceptual paper both in the structure and the inclusion of the bioturbation in a plant herbivore model. Fons van der Plas thanks for your fantastic work and intricate analyses of the 10 year exclosure project, it was a lot of fun philosophising over the many different ways this incredibly complex dataset could be wrestled into a good story, Joris Cromsigt thanks for always supporting our ideas and for bringing our often similar thoughts together.

To the students I had the great pleasure to work with; Rachel Engstrand, Greta Vega, Marinka van Puijenbroek, Myra Boers, Marycha Franken, Rutger Steever, Berber de Jong, Kasper Eising, Dieder de Haan, Lyke Stuurman, Kristel Schoender woerd, Stef Brands, Orsi Decker, Esther Bugel, Kaylee van Dijk. I learned as much from each of you as I hope you learned from me. It is fantastic to see how far you have all come since we met and I look forward to hearing about all of your own adventures in the future. The Topmaster and Meme program students cohorts 2006 until present, a passion for teaching is not something I anticipated, however it was easy in light of your great enthusiasm. Dick Visser thank you for your excellent work with the layout of this thesis. Jan Bakker, Peter Esselink, Rampal Etienne, Jacob Hogendorf, Jan van den Burg, Nelly Eck, Victor Jansen, Henk de Groot, Nano Herder, Ger Veltman, Corinne Eising, Paul Steerenberg, Emma Plender-Hartman, Joke Bakker and Ingeborg Jansen thanks very much for your support, arranging equipment and logistics, offering great advice and social evenings, you make working at the RuG - a great pleasure! -

My colleagues and office mates, Irma Knevel, Wimke Fokkema, Annelies van Ginkel, Laura Gomers, Elske Koppenaal, Kelly Elschot, Maarten Schrama, Roel van Klink, Steffi Nolte, Thijs Jansen, Ellen van Velzen, Jasper Ruifrok, Nina Bhola, Freek Mandema, Roos Veeneklaas, Esther Chang, thanks especially for making the coffee breaks and lunch breaks entertaining. Michiel Veldhuis thanks for all your support in the Africa projects and I hope that I returned the favour by looking after things on the Groningen side. Irma and Elske, we didn’t get together often enough but the change of pace on the occasional knutselling afternoons were gezellig and “we should do that more often”.

On the African front, thanks to my old department particularly Trevor Hill and Brice Gijsbertsen, thanks for being my second home base and for looking after me and our research vehicle between projects and being willing to read and comment on my research endeavours. Dayle Trotter thanks for keeping an eye on me on facebook and for all your encouragement. Dave Druce, Geoff Clinning, Cate James, Bhekukuhamba Abednig Mkhwanazi, Bheki Mnguni, Eric Khumalo, Falakhe Dlamini, Bom Ndwandwe, Thamalina and Mantombela of the Hluhluwe-Research Centre, thanks for supporting our research, accommodating us and for all your hard work.

ACKNOWLEDGEMENTS
Natuurmonumenten - Schiermonnikoog, Ezemvelo KZN Wildlife Hluhluwe-iMfolozi Park, and Rijksuniversiteit Groningen - Conservation Ecology Group are gratefully acknowledged for permission to conduct this research.

My "Crossways Crowd" buddies, Chris, Roddy, Trevor, Steve, Debbie and Joan, wow it's been an epic ride from those early days when we first met and I owned a small 50cc Honda and came to party with you guys on a Friday night, thanks for all your encouragement, we still anticipate a great reunion here in the northern hemisphere.... maybe Easter? Rolinka thanks for being a great friend, for stealing Skyla and Caleigh and filling their visits with you with custom designed entertainment. Thanks especially for your support, for asking me all those important questions and thinking with me, which lead to such great solutions for the little ladies. Dick Willemse you didn't make it to my defense but I will always remember you as my inspiration to learn Dutch (properly). You were always full of fantastic stories about absolutely everything and we never left your home without a fun Nederlands boek. I think of you often. Anneke, it is a great pleasure to know you and we look forward to many cups of coffee and occasionally (in the winter) a pot of snert. Marijke Drees thanks for being a fantastic friend, for your support and for the annual celebrations of Groningens Ontzet. Marten and Joyce thanks for your friendship, the Burchtweg is a wonderful place to live. Neighbours Braam, Marlies, Kasper, Nienke, Bart and Evelien, Mev. van de Wal and Mev. Abbring, thanks for welcoming us into the neighbourhood and encouraging the creative antics of our little ladies. Mourney thanks for making a space for us in your heart, our lives are richer for knowing you.

Georgette and Hacen as my paranymphs thanks for all your support particularly as I face the committee of my defense. Thanks for your friendship, for your jokes and for accepting my eternal enthusiasm (nerdiness and obsession) for slaying many mathematical and statistical beasts with Rrrrrrr! Georgie we have been friends for what feels like forever, thanks for your unfailing support. I have so many wonderful memories of all the adventures we have shared, let us continue to create them and reminisce.

My family! Thank you for supporting and encouraging your determined (and stubborn) youngest daughter, little sister, aunt, niece and cousin. I will always be the nature nut, the vehement defender of the three blind mice and the peacekeeper. To my family in law, thank you for all your incredible support from every corner of the planet. When I was six years old I told my mother, "I want to be a game ranger!" this was mostly influenced by the fact that I had just returned from a school outing to a small local nature reserve near Howick called, Umgeni Valley Project. A wooded valley filled with vervet monkeys, zebras, giraffes, wildebeest, impala, blesbuck and hundreds of beautiful bird species. These prophetic words changed only a little through the years as I learned becoming a scientist would suit me better with greater opportunities to travel and work in some of the planets most beautiful corners. My two little girls Skyla and Caleigh, thanks for patiently and enthusiastically including many field work trips into your weekends and holidays, thanks for listening avidly to my explanations on the importance of nature and natural processes, thanks espe-
cially for your youthful and vibrant perspective and always asking questions. Arabel our newest family member and highly educated cat, thanks for keeping me company on my many “25” hour days as I wrapped up this thesis. Owen thank you for always standing by me, no matter what new ideas or wild plans I come up with. I look back at our journey to see 21 years, 2 fantastic little girls, adventures from berg to beach in the southern hemisphere, now burning up some bicycle tyres in Europe, het leren van een nieuwe taal, maar ja - altijd samen.

Herdershut, Schiermonnikoog, October 2015