

Dr Jacques A. Deere

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Qualifications

Oct 2012 – Jan 2016	<i>D.Phil Zoology - University of Oxford</i> Thesis title: The role of dispersal in life history and population dynamics: an experimental and theoretical approach
April 2002 – Dec 2005	<i>Master of Science Zoology (Cum Laude) - Stellenbosch University</i> Thesis title: Acclimation effects on thermal tolerance in ameronothrid mites at sub – Antarctic Marion Island
Feb 1998 – April 2002	<i>Bachelor of Science (Honours) Zoology - University of Pretoria</i> Dissertation title: Inter-sexual differences in Black Rhinoceros (<i>Diceros bicornis</i>) diet quality, as indicated by twig dimensions in dung

Career History

Aug 2019 – present	Postdoctoral Researcher at the University of Oxford. Investigating how stochastic environments impact life history strategies. <i>Dr Rob Salguero-Gómez; Associate professor (P.I.)</i> .
Oct 2018 – Jan 2019	Guest Researcher in the Institute for Biodiversity and Ecosystem Dynamics (IBED) at the University of Amsterdam. Investigating the role of dispersal in eco-evolutionary dynamics.
July 2015 – Sept 2018	Postdoctoral Researcher in the Institute for Biodiversity and Ecosystem Dynamics (IBED) at the University of Amsterdam. Investigating, through theory and experimentation, the role of dispersal in eco-evolutionary dynamics. <i>Dr Isabel Smallegange (P.I.)</i> .
Jan 2013 – June 2015	D.Phil student at the University of Oxford. Experimentally investigating the population dynamics of the bulb mite, specifically focusing on the role of dispersal. Model building and analysis using the R package. <i>Prof. Tim Coulson (supervisor); Dr Isabel Smallegange, Assistant professor, Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam (co-supervisor)</i> .
July 2010 – Dec 2012	Laboratory Technician at Imperial College London. Position involved assisting in the planning and performing of behavioural, population and selection experiments in the bulb mite. Additional duties included maintaining the stock cultures and lab consumables. <i>Prof. Tim Coulson, Division of Biology (line manager)</i> .
Dec 2007 – June 2010	Research Coordinator for the NERC Centre for Population Biology at Imperial College London. Position involved managing and supporting research projects; financial management of approx. £1m per annum; liaising with research sponsors; coordinating the production of reports for research sponsors, including project reports and CPB annual reports and coordinating the workshop series. <i>Prof. Georgina Mace (line manager)</i> .
July 2004 – Dec 2006	Research Coordinator for the USAID/NRF Capacity Building Programme for Climate Change Research. Position involved logistical coordination, student coordination, budget management (of approx. R1,000,000.00 over 2 ½ years), report preparations and scientific duties (data collection and publications). <i>Prof. Steven L. Chown, Director, DST-NRF Centre of Excellence for Invasion Biology, Stellenbosch University (line manager)</i> .

Dec 2003- Feb 2004 Expedition to Kerguelen Island. Logistic duties: Sourcing and packaging of consumables and equipment to and from Reunion Island (departure and arrival point for Kerguelen). Scientific duties: Data collection and field assistance to collaborating international scientists. *Prof. Steven L. Chown, Department of Zoology, University of Stellenbosch (supervisor)*.

April 2002- May 2003 Collecting field data for MSc thesis on Marion Island. Was a member of the over-wintering team which involved collecting mite species from the field and running various physiological experiments in the laboratory. *Prof. Steven L. Chown, Department of Zoology, Stellenbosch University (supervisor)*.

Funding

*Single PI; **Lead PI; **Funded: £4,115**; In review: £288,189

In review	**NC3Rs Project Grant	£288,189
2019	**Techne Funding (<i>University of Surrey</i>) (<i>Workshop</i>)	£1,000
2014	*British Ecological Society (<i>Travel grant</i>)	£500
2014	*Lincoln College (<i>University of Oxford</i>) (<i>Graduate research grant</i>)	£415
2013	*Evolutionary Demography Society (<i>Travel grant</i>)	£200
2000	University of Pretoria achievement bursary	£2,000

Awards

2004 Best student oral presentation - Annual Research Meeting, Department of Botany and Zoology, Stellenbosch University

Research Supervision and Mentoring

Supervision:

M.Sc. project – Ilona van den Berg (Completed 2017, Vrije Universiteit Amsterdam). The effect of distinct dispersal life-histories in population models.

M.Sc. project – Tomos Potter (Completed 2016, University of Amsterdam). Consequences of dispersal on eco-evolutionary dynamics, in natal and recipient populations.

B.Sc. (Hons.) – Keafon Jumbam (Completed 2005, University of Transkei). Determining the critical thermal limits of Marion Island spiders. (Co-supervisor with Dr. Michael Somers).

Mentoring:

Currently mentoring: 1 BSc (University of Oxford); 1 High School student (Magdalen College School)

Past mentoring: 4 MSc (Stellenbosch University); 1 BSc (University of Oxford); 1 High School student (The Cherwell School)

Lecturing

Lecturer – Behaviour & Evolution; BSc course; University of Amsterdam (2016-2018).

Lecturer – Empirical Cycles; MSc course; University of Amsterdam (2018).

Assistant – Doctoral Training programme; University of Oxford (2019).

Assistant – BSc course; University of Oxford (2013, 2014).

Assistant – MSc course; Imperial College London (2011).

Academic services

- 2019 *Hiring committee for Biological Sciences undergraduate admissions, Pembroke College, University of Oxford*
- 2017 to 2019 *Guest editor, British Ecological Society cross-journal Special Feature: "The diversity of eco-evolutionary dynamics: comparing the feedbacks between ecology and evolution across scales"*
- 2015 to 2018 *PhD and PostDoc council (IBED, University of Amsterdam)*

Invited Talks

- 2017 Symposium. EVENET dispersal symposium, Ghent (Belgium)
- 2017 Seminar. Department of Biology, Ghent University (Belgium) (all costs paid)

Peer Reviewing

Scientific Journals:

- Proceedings of the Royal Society B
- Journal of Animal Ecology
- Oikos
- Oecologia
- Population Ecology
- Journal of Insect Science
- Experimental and Applied Acarology
- African Journal of Ecology

Funding Agencies:

- LE STUDIUM Smart Loire Valley Programme (France)

Organised workshops/symposium

- 2019 Working group co-organiser: Global linkages between plant metabolism, functioning and life history; University of Oxford, Oxford, UK.
- 2019 Workshop co-organiser: Academic ecosystems; University of Surrey, Guildford, UK.
- 2017 Symposium co-organiser: Eco-evolutionary dynamics; European Society of Evolutionary Biology (ESEB), Groningen, The Netherlands.

Memberships & committees

- 2017 to present *Dutch Society of Theoretical Biology (NVTB)*
- 2016 to present *European Society for Evolutionary Biology (ESEB)*
- 2014 to present *Ecological Society of America (ESA)*
- 2013 to present *British Ecological Society (BES)*

Selected Conference Presentations

- Deere, J.A.**, van den Berg, I., Roth, G. & Smallegange, I.M. (2017). The effects of distinct dispersal life-histories on population processes. Ecology Across Borders Joint Annual Meeting, Ghent, Belgium.
- Deere, J.A.** & Smallegange, I.M. (2017). Unsuccessful dispersal affects life history characteristics of natal populations. Dutch Society of Theoretical Biology (NVTB) Annual Meeting, Schoorl, The Netherlands.
- Deere, J.A.**, Coulson, T., Cubaynes, S. & Smallegange, I.M. (2014). Demographic costs of dispersal using the bulb mite (*Rhizoglyphus robini*) as a study system. Netherlands Annual Ecology Meeting, Lunteren, The Netherlands (*invited*)

Deere, J.A., Coulson, T., Cubaynes, S. & Smallegange, I.M. (2013). Modelling the cost of dispersal on the population dynamics of the bulb mite (*Rhizoglyphus robini*). 1st Evolutionary Demography Society annual meeting, Odense, Denmark.

Deere, J.A., Chown, S.L. & Marshall, D.J. (2005). Testing the Beneficial Acclimation Hypothesis. ZSSA Conference, Grahamstown, South Africa.

Deere, J.A., Chown, S.L. & Marshall, D.J. (2003). Acclimation effects on thermal tolerance in ameronothrid mites at Marion Island. Joint Conference of SASAQS and ZSSA, Cape Town, South Africa.

Outreach and media coverage

Public Talks:

2005. Sub-Antarctic Marion Island: Past and current research. Department of Ecology and Resource Management, University of Venda for Science and Technology

2004. Sub-Antarctic Marion Island: Past and current research. School of Botany and Zoology, University of KwaZulu Natal (Howard College and Pietermaritzburg Campus)

Media coverage:

Stewart et al. (2018) highlighted in [UvA press release](#), [Phys.Org](#), [Aurus](#), among others

Publication List

- The median impact factor of the peer-reviewed journals that I have published in is 2.77, which is 23% higher than the median IF in the field of Ecology and Evolutionary Biology.
- Total number of citations: 729; h-index: 8 (Google citations – Feb 2020).
- RG score on ResearchGate: 20.3 (higher than 72.5% of members); I have 52 followers.
- ORCID ID [0000-0001-6736-2223](#); [Google Scholar](#)

Peer-reviewed publications

1. Brunner, F.S., **Deere, J.A.**, Egas, M., Eizaguirre, C. & Raeymaekers, J.A.M. 2019. The diversity of eco-evolutionary dynamics: comparing the feedbacks between ecology and evolution across scales. *Functional Ecology* 33, 7-12.
2. Stewart, K. A., Van den Beuken, T.P.G., Rhebergen, F.T., **Deere, J.A.** & Smallegange, I.M. 2018. Evidence for a third male type in a male-dimorphic model species. *Ecology* 99, 1685-1687. DOI:10.1002/ecy.2239
3. **Deere, J.A.**, Coulson, T., Cubaynes, S. & Smallegange, I.M. 2017. Unsuccessful dispersal affects life history characteristics of natal populations: The role of dispersal related variation in vital rates. *Ecological Modelling* 366, 37-47.
4. **Deere, J.A.** & Smallegange, I.M. 2015. Life history consequences of the facultative expression of a dispersal life stage in the phoretic bulb mite (*Rhizoglyphus robini*). *PLoS One*. 10, e0136872.
5. Smallegange, I.M. & **Deere, J.A.** 2014. Eco-evolutionary interactions as a consequence of selection on a secondary sexual trait. In J. Moya-Laraño, J. Rowntree & G. Woodward (Eds.), *Eco-Evolutionary Dynamics (Advances in Ecological Research, 50)* (pp. 145-169). Boston: Elsevier/Academic Press.
6. Smallegange, I.M., **Deere, J.A.** & Coulson, T. 2014. Correlative changes in life-history variables in response to environmental change in a model organism. *American Naturalist* 183, 784-797.

7. **Deere, J.A.** & Smallegange, I.M. 2014. Does frequency-dependence determine male morph survival in the bulb mite (*Rhizoglyphus robini*)? *Experimental and Applied Acarology* 62, 425-436.
8. Terblanche, J.S., Clusella-Trullas, S., **Deere, J.A.**, Van Vuuren, B.J. & Chown, S.L. 2009. Directional evolution of the slope of the metabolic rate-temperature relationship is correlated with climate. *Physiological and Biochemical Zoology* 82, 495-503.
9. Terblanche, J.S., Clusella-Trullas, S., **Deere, J.A.** & Chown, S.L. 2008. Thermal tolerance in a south-east African population of the tsetse fly *Glossina pallidipes* (Diptera, Glossinidae): Implications for forecasting climate change impacts. *Journal of Insect Physiology* 54, 114-127.
10. Jumbam, K.R., Terblanche, J.S., **Deere, J.A.**, Somers, M.J. & Chown, S.L. 2008. Critical thermal limits and their responses to acclimation in two sub-Antarctic spiders: *Myro kerguelensis* and *Prinerigone vagans*. *Polar Biology* 31, 215-220.
11. Terblanche, J.S., **Deere, J.A.**, Clusella-Trullas, S., Janion, C. & Chown, S.L. 2007. Critical thermal limits depend on methodological context. *Proceedings of the Royal Society B* 274, 2935-2942.
12. **Deere, J.A.** & Chown, S.L. 2006. Testing the beneficial acclimation hypothesis and its alternatives for locomotor performance. *American Naturalist* 168, 630-644.
13. **Deere, J.A.**, Marshall, D.J. & Chown, S.L. 2006. Phenotypic plasticity of thermal tolerances in five oribatid mite species from sub-Antarctic Marion Island. *Journal of Insect Physiology* 52, 693-700.

Submitted

1. **Deere, J.A.**, van den Berg, I., Roth, G. & Smallegange, I.M. Modelling the impact of dispersal on a natal population that exhibits boom-bust dynamics. *Population Ecology*. bioRxiv preprint: <https://doi.org/10.1101/402198>

In preparation

1. **Deere, J.A.**, Aboobaker, A. & Salguero-Gómez, R. Calorie Restriction and longevity: challenges and future directions. *Science*
2. **Deere, J.A.** & Smallegange, I.M. Does selection on dispersal phenotypes impact eco-evolutionary interactions in natal populations. *Ecology*
3. **Deere, J.A.**, Coulson, T. & Smallegange, I.M. Combined effects of coloured environmental noise and unsuccessful dispersal on stochastic growth rate of natal populations. *Oikos*
4. Rhebergen, F.T., van den Beuken, T.P.G., **Deere, J.A.**, Skrzynecka, A.M., Radwan, J. & Smallegange, I.M. Disentangling alternative hypotheses on the evolution and maintenance of alternative reproductive phenotypes. *Evolution*

Other publications

PhD thesis

Deere, J.A. 2016. The role of dispersal in life history and population dynamics: an experimental and theoretical approach. *PhD thesis*. University of Oxford, U.K. 242pp