

Education

- 2003- 2009 **PhD Soil Biology**
Wageningen University, Wageningen, the Netherlands (0.8 fte)
'Soil fungi and nitrogen cycling. Causes and consequences of changing fungal biomass in grasslands' Department of Soil Quality (Wageningen University) and Alterra, Wageningen UR, Wageningen, the Netherlands. Supervisors: Dr. Ellis Hoffland, Dr. Jaap Bloem, Prof. Lijbert Brussaard
- 1996- 2003 **BSc and MSc Environmental Sciences (Milieuhygiëne), specialisation Soil Quality**
Wageningen University, Wageningen, the Netherlands
'Heavy-metal accumulation in small mammals in a diffusely polluted floodplain' MSc thesis Nature Conservation (Radboud University, Nijmegen, the Netherlands). Supervisor: Dr. Sander Wijnhoven
'Within trophic group interactions of bacterivorous nematode species and their effects on the bacterial community and nitrogen mineralization' MSc thesis Soil Biology (Wageningen University, Wageningen, the Netherlands). Supervisors: Dr. Maria Postma-Blaauw, Dr. Ron de Goede, Prof. dr. Lijbert Brussaard

Appointments

- 2019-present **Professor of Earth Surface Science**, Department of Ecosystem and Landscape Dynamics, Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam, The Netherlands
- August 2017-
March 2018 **Maternity leave**
- 2017-present **Senior Research Fellow (Associate Professor)/ BBSRC David Phillips Fellow**, School of Earth and Environmental Sciences, The University of Manchester, United Kingdom (20% appointment from January 2019).
- 2015-2017 **BBSRC David Phillips Fellow**, Faculty of Life Sciences, The University of Manchester, United Kingdom.
- July- 2014-
January 2015 **Maternity leave**
- 2013-2015 **Faculty Fellow**, Faculty of Life Sciences, The University of Manchester, United Kingdom.
- 2012-2013 **Senior Research Associate** within EU-funded Ecofinders project in the Soil and Ecosystem Ecology group, Lancaster Environment Centre, Lancaster University, United Kingdom. P.I.: Prof. Richard Bardgett
- 2009- 2012 **Research Associate** within EU-funded project SOILSERVICE in the Soil and Ecosystem Ecology group, Lancaster Environment Centre, Lancaster University, United Kingdom. P.I.: Prof. Richard Bardgett

Teaching and supervision

Course coordinator:

- Plant-soil interactions in food production systems (2nd year BSc, University of Amsterdam)

Courses:

- Ecology & Ecosystems (2nd year BSc, University of Manchester)
- Human Impacts on the Biosphere (3rd year BSc and MSc, University of Manchester)

- Urban Biodiversity (2nd year BSc field course, University of Manchester)
- Populations to Ecosystems (2nd year BSc, Lancaster University)

BSc and MSc students:

- Supervision of 2nd year BSc dissertation students (2 each year)
- Supervision of final year BSc and MSc projects (2-5 each year)
- Supervision of several international internship students
- Summer Sustainability Research Student (2015)
- Personal and academic advisor of 1st year tutorial groups

PhD students:

- 2016-2019 Supervisor of Reuben Margerison (BBSRC DTP studentship). Project: Fundamental controls on plant root exudation under climate change
- 2016-2019 Co-supervisor of Christopher Sweeney (BBSRC DTP studentship). Project: Digging deeper: the role of root traits in soil C cycling
- 2016-2019 Supervisor of Cristina Heredia (CONACYT PhD studentship). Project: Root turnover and decomposition effects on soil C cycling
- 2015-2018 Advisor of Hayley Craig (NERC DTP studentship)
- 2015-2018 Advisor of Oscar Aguinaga Vargas (Peruvian government studentship)
- 2014-2018 Co-supervisor of Melanie Edgar (BBSRC CASE studentship). Project: Landscape scale effects of grazing on soil C stocks
- 2014-2018 Co-supervisor of Danielle Satterthwaite (NERC DTP studentship). Project: Climate effects on C cycling through litter quality

Grant funding

- 2017 **NERC Standard Grant (NE/P01206X/1)** “Developing a trait-based framework for predicting soil microbial community response to extreme events” - £800k (University of Manchester £648,189), 3 years - **Lead PI** (with co-I Chris Knight (University of Manchester), Rob Griffiths (CEH Wallingford), and 12 collaborators across 10 European countries)
- 2017 **NERC Soil Security Programme (NE/P013708/1)** “Resilience and regime shifts in peatland soil microbial communities: implications for soil functioning” - £311,595, 18 months - **Co-I** (Lead PI Richard Bardgett)
- 2015 **NERC/BBSRC Soil Security Programme (NE/M017028/1)** “Controls on the stability of soils and their functioning under land use and climate change” - £1.6 million, 3 years - **Co-I** (Lead PI Richard Bardgett, University of Manchester £576,982, with Aberdeen University and Queens University Belfast).
- 2015 **BBSRC David Phillips Fellowship (BB/L02456X/1)** “The root to stability – the role of plant roots in ecosystem response to climate change” - £1.3M, 5 years - **PI**
- 2013 **Royal Society International Exchanges Grant** “Ecosystem stability along a primary succession gradient” - £11,282, 24 months - **Lead PI**. (Co-I Wolfgang Wanek, University of Vienna, Austria).
- 2012 **NERC Life Sciences Mass Spectrometry Steering Committee Grant** analytical costs “Primary succession and ecosystem nitrogen retention in glacier forelands” - £14,000 - **PI**
- 2012 **British Ecological Society Early Career Project Grant** “Primary succession and ecosystem nitrogen retention in glacier forelands” - £19,640, 18 months - **PI**

Memberships

- 2012-2015 Associate Member of **F1000**
- Since 2011 **Ecological Society of America**
- Since 2009 **British Ecological Society**

Leadership and external responsibilities

- 2019-present Member of the Editorial Board of **Soil Organisms**

- 2019-2021 Chair of the International Scientific Program Committee for the **Third Global Soil Biodiversity Conference 2021**
- 2019-2020 Member of the Scientific Theme Committee 'Climate Action' for **Eurosoil 2020**
- 2018 Editor, **Frontiers in Microbiology Special Research Topic** "The soil microbiome and multi-trophic interactions that regulate soil carbon and nutrient flux", together with Eoin Brodie, Diana Wall, Stefan Geisen, and Javier Ceja Navarro
- 2017-present Curator and founder of list "**Women in soil science**"
- 2017-2019 **500 Women Scientists Manchester Pod** coordinator
- 2017-present Leading the set up of the **European Chapter of 500 Women Scientists**
- 2017-present Member of the **BBSRC Pool of Experts**
- 2016 Member of the leadership team of **500 Women Scientists**
- 2016-2017 Member of the International Scientific Committee for the **Second Global Soil Biodiversity Conference**, China, 2017
- 2014-present Member of the Editorial Board of **Oxford Bibliographies Online Ecology**
- 2013-present Trustee of the **Ecological Continuity Trust**
- 2013-2019 Member of the Editorial Board of **Ecosystems**
- 2013-2014 Member of the Advisory Board for the **NERC Knowledge Exchange Programme on Sustainable Food Production**
- 2013-present Associate Editor of **Journal of Ecology**
- 2012-present Member of the **BES Review College**
- 2012-2016 Secretary and founder of the **BES special interest group Plants, Soils, Ecosystems** (currently >300 members)
- 2011 **Mentor** in the **Mentoring Scheme for Women in Ecology** of the British Ecological Society
- Reviewing Journals: Science, PNAS, Nature Climate Change, Nature Communications, Nature Ecology and Evolution, Nature Plants, The ISME Journal, Ecology Letters, Global Change Biology, Journal of Ecology, Functional Ecology, Basic and Applied Ecology, Biogeochemistry, Ecosystems, and Soil Biology & Biochemistry
- Grants: BBSRC GCRF, Dutch National Science Foundation (NWO), NERC Soil Security Independent Research Fellowships 2016, BiodivERsA International Research Proposals 2016, National Research Foundation of South Africa, NERC standard grants, BBSRC standard grants
- Examinations - Internal PhD examiner Marian Cabrera, University of Amsterdam, the Netherlands. Thesis title: 'Trait-based studies of Paramo vegetation in the Northern Andes' (4th of June 2019)
 - External PhD examiner Simone Weidner, Utrecht University, the Netherlands. Thesis title: 'Linking microbial community assembly and function: diversity, multitrophic interactions and post-disturbance microbiome reassembly' (3rd of April 2019)
 - External PhD examiner Amber Heijboer, University of Amsterdam, the Netherlands. Thesis title: 'Disentangling microbial decomposition networks. Linking detritus-based soil microbial food webs to ecosystem processes' (6th of June 2018)
 - Internal first-year continuation examiner of Haya Alsammar, The University of Manchester. Continuation report title: 'Environmental Genomics of Yeasts' (1st of September 2015)

- External assessor of PhD thesis Alberto Canarini, The University of Sydney, Australia. Thesis title: "Drought effects on soil carbon stability mediated by rhizodeposition and microbes" (12th of October 2016)
- External PhD examiner Karst Broelsma, Wageningen University, the Netherlands. Thesis title: 'Connecting the Green with the Dark Side - Linkages between Plant Traits and Soil Ecology' (10th of October 2014)

Internal responsibilities

2017-2018	Member of the Equality and Diversity committee of the School of Earth and Environmental Sciences, University of Manchester
2017-2018	Member of the Athena Swan self-assessment team of the School of Earth and Environmental Sciences, University of Manchester
2016-2018	Member of Faculty of Science and Engineering internal evaluation panel for NERC Discovery Grants
2015-2018	Member of mock interview panel for several fellowship applicants
2015-present	Mentoring early career scientists for fellowship applications and providing feedback on proposals (internal and external), including blog post about fellowship applications
2015-present	Conducting UCAS interviews with final year high school students
2015	Panel member for NERC DTP PhD studentship selection

Peer-reviewed publications

De Vries, F.T., A. Williams, F. Stringer, R. Willcocks, R. McEwing, H. Langridge, A.L. Straathof (2019) Changes in root exudate induced respiration reveal a novel mechanism through which drought affects ecosystem carbon cycling. *New Phytologist*, in press

Chomel, M., J.M. Lavalley, N. Alvarez-Segura, F. de Castro, J.M. Rhymes, T. Caruso, **F.T. de Vries**, E.M. Baggs, M.C. Emmerson, R.D. Bardgett, D. Johnson (2019) Drought decreases incorporation of recent photosynthate into soil food webs regardless of their trophic complexity. *Global Change Biology*, in press.

Thomas, H., Myers-Smith, I., Bjorkman, A., Elmendorf, S., Blok, D., Cornelissen, J., Forbes, B., Hollister, R., Normand, S., Prevey, J., Rixen, C., Schaepman-Strub, G., Wilmking, M., Wipf, S., Cornwell, W. K., Kattge, J., Goetz, S., Guay, K., Alatalo, J., Anadon Rosell, A., Angers-Blondin, S., Berner, L., Björk, R., Buchwal, A., Buras, A., Carbognani, M., Christie, K., Collier, L., Cooper, E., Eskelinen, A., Frei, E., Grau, O., Grogan, P., Hallinger, M., Heijmans, M., Hermanutz, L., Hudson, J., Hülber, K., Iturrate-Garcia, M., Iversen, C., Jaroszynska, F., Johnstone, J., Kaarlejarvi, E., Kulonen, A., Lamarque, L., Levesque, E., Little, C., Michelsen, A., Milbau, A., Nabe-Nielsen, J., Nielsen, S., Ninot Sugrañes, J.M., Oberbauer, S., Olofsson, J., Onipchenko, V., Petraglia, A., Rumpf, S., Semenchuk, P., Soudzilovskaia, N., Spasojevic, M., Speed, J., Tape, K., Te Beest, M., Tomaselli, M., Trant, A., Treier, U., Venn, S., Vowles, T., Weijers, S., Zamin, T., Atkin, O., Bahn, M., Blonder, B., Campetella, G., Cerabolini, B., Chapin, F., Dainese, M., **De Vries, F.T.**, Diaz, S., Green, W., Jackson, R., Manning, P., Niinemets, Ü., Ozinga, W., Penuelas, J., Reich, P., Schamp, B., Sheremetev, S., and Van Bodegom, P. (2019) Traditional plant functional groups explain variation in economic but not size-related traits across the tundra biome. *Global Ecology and Biogeography* 28:78-95.

Bjorkman, A.D., Myers-Smith, I.H., Elmendorf, S.C., Normand, S., Rüger, N., Beck, P.S.A., Blach-Overgaard, A., Blok, D., Cornelissen, J.H.C., Forbes, B.C., Georges, D., Goetz, S.J., Guay, K.C., Henry, G.H.R., HilleRisLambers, J., Hollister, R.D., Karger, D.N., Kattge, J., Manning, P., Prevéy, J.S., Rixen, C., Schaepman-Strub, G., Thomas, H.J.D., Vellend, M., Wilmking, M., Wipf, S., Carbognani, M., Hermanutz, L., Lévesque, E., Molau, U., Petraglia, A., Soudzilovskaia, N.A., Spasojevic, M.J., Tomaselli, M., Vowles, T., Alatalo, J.M., Alexander, H.D., Anadon-Rosell, A., Angers-Blondin, S., Te Beest, M., Berner, L., Björk, R.G., Buchwal, A., Buras, A., Christie, K., Cooper, E.J., Dullinger, S., Elberling, B., Eskelinen, A., Frei, E.R., Grau, O., Grogan, P., Hallinger, M., Harper, K.A., Heijmans, M.M.P.D., Hudson, J., Hülber, K., Iturrate-Garcia, M., Iversen, Colleen M., Jaroszynska, F., Johnstone, J.F., Jørgensen, R.H., Kaarlejärvi, E., Klady, R., Kuleza, S., Kulonen, A., Lamarque, L.J., Lantz, T., Little, C.J., Speed, J.D.M., Michelsen, A., Milbau, A., Nabe-Nielsen, J., Nielsen, S., Schøler, Ninot, J.M., Oberbauer, S.F., Olofsson, J., Onipchenko, V.G., Rumpf, S.B., Semenchuk, P., Shetti, R., Collier, L., Siegwart, Street, L.E., Suding, K.N., Tape, K.D., Trant, A., Treier, U.A., Tremblay, J.-P., Tremblay, M., Venn, S., Weijers, S., Zamin, T., Boulanger-Lapointe, N., Gould, W.A., Hik, D.S., Hofgaard, A., Jónsdóttir, I.S., Jorgenson, J., Klein, J., Magnusson, B., Tweedie, C., Wookey, P.A., Bahn, M., Blonder, B., van Bodegom,

P.M., Bond-Lamberty, B., Campetella, G., Cerabolini, B.E.L., Chapin, F.S., Cornwell, W.K., Craine, J., Dainese, M., **De Vries, F.T.**, Díaz, S., Enquist, B.J., Green, W., Milla, R., Niinemets, Ü., Onoda, Y., Ordoñez, J.C., Ozinga, W.A., Penuelas, J., Poorter, H., Poschlod, P. Reich, P.B., Sandel, B., Schamp, B., Sheremetev, S., Weiher, E. (2018) Plant functional trait change across a warming tundra biome. *Nature* 562:57-62.

Caruso, T., **F.T. de Vries**, R.D. Bardgett, J. Lehmann (2018) Soil organic carbon dynamics matching ecological equilibrium theory. *Ecology and Evolution* 8:11169-11178.

De Vries, F.T., R.I. Griffiths, M. Bailey, H. Craig, M. Girlanda, H.S. Gweon, S. Hallin, A. Kaisermann, A. Keith, M. Kretschmar, P. Lemanceau, E. Lumini, K. Mason, A. Oliver, N. Ostle, J. Prosser, C. Thion, B. Thomson, and R.D. Bardgett (2018) Soil bacterial networks are less stable under drought than fungal networks. *Nature Communications* 9:3033.

Delgado-Baquerizo, M., E.L. Fry, D.J. Eldridge, **F.T. de Vries**, P. Manning, K. Hamonts, J. Kattge, G. Boenisch, B.K. Singh, R.D. Bardgett (2018) Plant attributes explain the distribution of soil microbial communities in two contrasting regions of the globe. *New Phytologist* 219:574-587.

Butler, E.E., A. Datta, H. Flores-Moreno, M. Chen, K.R. Wythers, F. Fazayeli, A. Banerjee O.K. Atkin, J. Kattge, B. Amiaud, B. Blonder, G. Boenisch, B. Bond-Lamberty, K.A. Brown, C. Byun, G. Campetella, B.E.L. Cerabolini, J.H.C. Cornelissen, J.M. Craine, D. Craven, **F.T. de Vries**, S. Díaz, T. Domingues, E. Forey, A. Gonzalez, N. Gross, W. Han, W.N. Hattingh, T. Hickler, S. Jansen, K. Kramer, N.J.B. Kraft, H. Kurokawa, D.C. Laughlin, P. Meir, V. Minden, Ü. Niinemets, Y. Onoda, J. Peñuelas, Q. Read, F. Valladares Ros, L. Sack, B. Schamp, N.A. Soudzilovskaia, M.J. Spasojevic, E. Sosinski, P. Thornton, P.M. van Bodegom, M. Williams, C. Wirth, and P.B. Reich. (2017) Mapping local and global variability in plant trait distributions. *Proceedings of the National Academy of Sciences* 114(51):E10937-E10946

Ramirez, K.S., C.G. Knight, M. de Hollander, F.Q. Brearley, B. Constantinides, T.E.A. Cotton, S. Creer, T.W. Crowther, J. Davison, M. Delgado-Baquerizo, E. Dorrepaal, D.R. Elliott, G. Fox, R.I. Griffiths, C. Hale, K. Hartman, A. Houlden, D.L. Jones, E.J. Krab, F.T. Maestre, K.L. McGuire, S. Monteux, C.H. Orr, W.H. van der Putten, I.S. Roberts, D.A. Robinson, J. Rocca, J. Rowntree, K. Schlaeppli, M. Shepherd, B.K. Singh, A.L. Straathof, J.M. Talbot, C. Thion, M. van der Heijden, and **F.T. de Vries** (2018) Detecting macroecological patterns in bacterial communities across independent studies of global soils. *Nature Microbiology* 3:189-196.

Kaisermann, A., **F.T. de Vries**, R.I. Griffiths, and R.D. Bardgett (2017) Legacy effects of drought on plant-soil feedbacks and plant-plant interactions. *New Phytologist* 215:1413-1424.

De Vries, F.T. and M.D. Wallenstein (2017) Below-ground connections underlying above-ground food production: a framework for optimising ecological connections in the rhizosphere. *Journal of Ecology* 105:913-920.

Key, G., M.G. Whitfield, J. Cooper, **F.T. de Vries**, M. Collison, T. Dedousis, R. Heathcote, B. Roth, S. Mohammed, A. Molyneux, W.H. van der Putten, L.V. Dicks, W.J. Sutherland, R.D. Bardgett (2016) Knowledge needs, available actions and future challenges in agricultural soils. *SOIL* 2:511-521.

De Vries, F.T. and T. Caruso (2016) Eating from the same plate? Revisiting the role of labile carbon inputs in the soil food web. *Soil Biology & Biochemistry* 102:4-9.

De Vries, F. T., C. Brown, and C.J. Stevens (2016) Grassland species root response to drought: consequences for soil carbon and nitrogen availability. *Plant and Soil* 409:297-312.

Thion, C., J. Poirel, T. Cornulier, **F.T. De Vries**, R.D. Bardgett, and J.I. Prosser (2016) Plant nitrogen-use strategy as a driver of rhizosphere archaeal and bacterial ammonia oxidiser abundance. *FEMS Microbiology Ecology* 92(7) fiw091.

Griffiths, B.S, J. Römcke, R. Schmelz, A. Scheffczyk, J. Faber, J. Bloem, G. Pérès, D. Cluzeau, A. Chabbi, M. Suhadolc, P. Sousa, P. Martins da Silva, F. Carvalho, S. Mendes, P. Morais, R. Francisco, C. Pereira, M. Bonkowski, S. Geisen, R. Bardgett, **F.T. de Vries**, T. Bolger, T. Dirilgen, O. Schmidt, A. Winding, N. Hendriksen, A. Johansen, L. Philippot, P. Plassart, D. Bru, B. Thompson, R. Griffiths, A. Keith, M. Rutgers, C. Mulder, E. Hannula, R. Creamer, D. Stone (2016) Selecting cost effective and policy-relevant biological

indicators for European monitoring of soil biodiversity and ecosystem function. *Ecological Indicators* 69:213-223.

De Vries, F.T. and R.D. Bardgett (2016) Plant community controls on short-term ecosystem nitrogen retention. *New Phytologist* 210:861-874. Nature Plants Research Highlight: <http://www.nature.com/articles/nplants20167>

Ramirez, K.S., M. Döring, N. Eisenhauer, C. Gardi, J. Ladau, J.W. Leff, G. Lentendu, Z. Lindo, M.C. Rillig, D. Russell, S. Scheu, M.G. St. John, **F.T. de Vries**, T. Wubet, W.H. van der Putten, and D.H Wall (2015) Towards a global platform for linking soil biodiversity data. *Frontiers in Ecology and Evolution* 3:91.

Manning, P., **F.T. de Vries**, J.R.B. Tallwin, R. Smith, S.R. Mortimer, E.S. Pilgrim, K.A. Harrison, D.G. Wright, H. Quirk, J. Benson, B. Shipley, J.H.C. Cornelissen, J. Kattge, G. Bönisch, C. Wirth, R.D. Bardgett (2015) Simple measures of climate, soil properties and plant traits predict national-scale grassland soil carbon stocks. *Journal of Applied Ecology* 52(5):1188-1196.

De Vries, F.T., H. Bracht Jørgensen, K. Hedlund, and R.D. Bardgett (2015) Disentangling plant and soil microbial controls on carbon and nitrogen loss in grassland mesocosms. *Journal of Ecology* 103(3):629-640.

Tsiafouli, M., E. Thébault, S. Sgardelis, P. de Ruiter, W.H. van der Putten, K. Birkhofer, L. Hemerik, **F.T. de Vries**, R. Bardgett, M. Brady, L. Bjørnlund, H. Jørgensen, S. Christensen, T. D'Hertefeldt, S. Hotes, W.H.G. Hol, J. Frouz, M. Liiri, S. Mortimer, H. Setälä, J. Tzanopoulos, K. Uteseny, Karoline, V. Pižl, J. Stary, V. Wolters, K. Hedlund (2015) Intensive agriculture reduces soil biodiversity across Europe. *Global Change Biology* 21:973-985. Highly Cited Paper on Web of Science (top 1% of its academic field)

Bardgett, R.D., L. Mommer, and **F.T. de Vries** (2014) Going underground: root traits as drivers of ecosystem processes. *Trends in Ecology and Evolution* 29:692-699.

Setälä, H., R. D. Bardgett, K. Birkhofer, M. Brady, L. Byrne, P. C. de Ruiter, **F.T. de Vries**, C. Gardi, K. Hedlund, L. Hemerik, S. Hotes, M. Liiri, S. R. Mortimer, M. Pavao-Zuckerman, R. Pouyat, M. Tsiafouli, W.H. van der Putten (2014) Urban and agricultural soils: conflicts and trade-offs in the optimization of ecosystem services. *Urban Ecosystems* 17:239-253.

De Vries, F.T. and A. Shade (2013) Controls on soil microbial community stability under climate change. *Frontiers in Microbiology* 4:265.

De Vries, F.T., E. Thébault, M. Liiri, K. Birkhofer, M.A. Tsiafouli, L. Bjørnlund, H. Bracht Jørgensen, M.V. Brady, S. Christensen, P.C. de Ruiter, T. d'Hertefeldt, J. Frouz, K. Hedlund, L. Hemerik, W.H.G. Hol, S. Hotes, S.R. Mortimer, H. Setälä, S.P. Sgardelis, K. Uteseny, W.H. van der Putten, V. Wolters, and R.D. Bardgett (2013) Soil food web properties explain ecosystem services across European land use systems. *Proceedings of the National Academy of Sciences* 110:14296-14301. Highly Cited Paper on Web of Science (top 1% of its academic field); Faculty of 1000 Recommended: <http://f1000.com/prime/718101722> ; Nature Research Highlight: http://www.nature.com/nature/journal/v500/n7463/full/500380c.html?WT.ec_id=NATURE-20130822

Bardgett, R.D., P. Manning, E. Morriën, and **F.T. de Vries** (2013) Hierarchical responses of plant-soil interactions to climate change: consequences for the global carbon cycle. *Journal of Ecology* 101:334-343.

De Vries, F.T., J. Bloem, H. Quirk, C.J. Stevens, R. Bol, and R.D. Bardgett (2012) Extensive management promotes plant and microbial nitrogen retention in temperate grassland. *PLoS ONE* 7:e51201. Faculty of 1000 Recommended: <http://f1000.com/prime/717968256>

De Vries, F.T., P. Manning, J. Tallwin, S.R. Mortimer, E. Pilgrim, K. Harrison, P. Hobbs, H. Quirk, B. Shipley, H.J.C. Cornelissen, J. Kattge, and R.D. Bardgett (2012) Abiotic drivers and plant traits explain landscape-scale patterns in soil microbial communities. *Ecology Letters* 15:1230-1239.

De Vries, F.T. and R.D. Bardgett (2012) Plant-microbial linkages and ecosystem N retention: lessons for sustainable agriculture. *Frontiers in Ecology and the Environment* 10:425-432.

De Vries, F.T., M. Liiri, L. Bjørnlund, H. Setälä, S. Christensen, and R.D. Bardgett (2012) Legacy effects of drought on plant growth and the soil food web. *Oecologia* 170:821-833.

Thiele-Bruhn, S., J. Bloem, **F.T. De Vries**, K. Kalbitz, C. Wagg (2012) Linking soil biodiversity and agricultural management. *Current Opinion in Environmental Sustainability* 4:523-528.

De Vries, F.T., M. Liiri, L. Bjørnlund, M. Bowker, S. Christensen, H. Setälä, and R.D. Bardgett (2012) Land use alters the resistance and resilience of soil food webs to drought. *Nature Climate Change* 2:276-280. http://www.nature.com/nclimate/journal/v2/n4/full/nclimate1392.html?WT.ec_id=NCLIMATE-201204

De Vries, F.T., J.W. van Groenigen, E. Hoffland, and J. Bloem (2011) Nitrogen losses from two grassland soils with different fungal biomass. *Soil Biology & Biochemistry* 43:997-1005.

De Vries, F.T., E. Bååth, T.W. Kuyper, and J. Bloem (2009) High turnover of fungal hyphae in incubation experiments. *FEMS Microbiology Ecology* 67:389-396.

Van Eekeren, N., D. van Lieere, **F.T. de Vries**, M. Rutgers, R. de Goede, and L. Brussaard (2009) A mixture of grass and clover combines the positive effects of both plant species on selected soil biota. *Applied Soil Ecology* 42:254-263.

De Vries, F.T., J. Bloem, N. van Eekeren, L. Brussaard, and E. Hoffland (2007) Fungal biomass in pastures increases with age and reduced N input. *Soil Biology & Biochemistry* 39:1620-1630.

Wijnhoven, S., R. Leuven, G. van der Velde, G. Jungheim, E.I. Koelemij, **F.T. de Vries**, H.P.J. Eijsackers, and A.J.M. Smits (2007) Heavy-metal concentrations in small mammals from a diffusely polluted floodplain: Importance of species- and location-specific characteristics. *Archives of Environmental Contamination and Toxicology* 52:603-613.

De Vries, F.T., E. Hoffland, N. van Eekeren, L. Brussaard, and J. Bloem (2006) Fungal/bacterial ratios in grasslands with contrasting nitrogen management. *Soil Biology & Biochemistry* 38:2092-2103. Highly Cited Paper on Web of Science (top 1% of its academic field). The work presented in this article featured in the national Dutch A-level (VWO) biology exams in 2013.

Postma-Blaauw, M.B., **F.T. de Vries**, R.G.M. de Goede, J. Bloem, J.H. Faber, and L. Brussaard (2005) Within trophic group interactions of bacterivorous nematode species and their effects on the bacterial community and nitrogen mineralization. *Oecologia* 142:428-439.

Other publications

Best-read blog posts (franciskadevries.wordpress.com):

The reality of maternity leave – 8th March 2018

Soil science. A man's world? – 1st March 2017

On gender bias in research funding – 8th August 2016

Soil boring? My take on the image problem of soil science – 14th October 2015

How I got my fellowship – and how you might get yours – 2nd December 2014

De Vries, F.T. and R.I. Griffiths (2018) Impacts of climate change on microbial communities and their functioning. In: *Changing soil processes and ecosystem properties in the Anthropocene*. W. Howarth and Y. Kuzyakov (Eds.): 111-129.

De Vries, F.T. (2016) Soil organisms and climate change. What are the impacts? *Biological Sciences Review* 29(1):22-26.

Bardgett, R.D., **F.T. de Vries**, W.H. van der Putten (2016) Soil biodiversity and ecosystem functioning. In: *Microbial Biomass – A paradigm shift in terrestrial biogeochemistry*. K. Tate (Ed.): 199-140.

De Vries, F.T. and R.D. Bardgett (2015) Climate change effects on soil biota in the UK. *Terrestrial Biodiversity Climate change Impacts Report Card Technical paper*. Bodsey Ecology Limited, Huntingdon, UK. Source paper for Biodiversity Climate Change Impacts Report Card 2015.

De Vries, F.T. (2013) A short history of aboveground-belowground interactions. *BES Bulletin* 44(2): 46-47.

De Vries, F.T. and R.D. Bardgett (2012) Soil Ecology. In *Oxford Bibliographies Online: Ecology*. Ed. D. Gibson. New York: Oxford University Press. <http://www.oxfordbibliographies.com/view/document/obo-9780199830060/obo-9780199830060-0067.xml>

De Vries, F.T. (2012) Hard Core Glacier Sampling. *BES Bulletin* 43(4):48-50.

Ramirez, K.S., R.D. Bardgett, B. Fricks, L. Montanarella, J. Six, W.H. van der Putten, D.H. Wall, N. Ameloot, F. Ayuke, S.A. Banwart, D.E. Bignell, H. Black, D. Bossio, V.J. Bruckman, L. Brussaard, C. Campbell, K. Campbell, T. Soares de Carvalho, J.M. Cooper, H.L. Coutinho, K.W.T. Goulding, R.I. Griffiths, J. Harris, D.W. Hopkins, B. Houskova, W. Jehne, P. Lemanceau, Z. Lindo, P. Murray, A. Muscolo, A. Ogram, K. Ritz, J. Rombke, K. Scow, **F.T de Vries**, and V. Wolters (2012) White Paper on the First Open Meeting of the Global Soil Biodiversity Initiative (GSBI) Held in London, England, 30 March 2012.

De Vries, F.T. (2011) A peek behind the curtains of the BES mentoring scheme for women in ecology. *BES Bulletin* 42(3):19

Bardgett, R. D., J.N. Quinton, and **F.T. de Vries** (2011) Managing soils for ecosystem services. *Public Service Review: UK Science & Technology* 1:14-15.

De Vries, F.T. (2009) Soil fungi and nitrogen cycling: causes and consequences of changing fungal biomass in grasslands. PhD thesis, Wageningen University.

De Vries, F.T. (2003) Practical use of a hydrological model for peatlands in Borneo. Modeling the Sungai Sebangau catchment in Central Kalimantan, Indonesia. Wageningen, Alterra, Green World Research. Alterra report 797. 87pp.

Invited presentations

Soil C cycling in a changing world: the role of root-microbe interactions

Invited speaker at SOM2019, 6-11 October 2019, Adelaide, Australia

There should be quota for men in science

L'Oréal Foundation breakfast debate (curated by the New York Times), 13 March 2019, Paris, France

Climate change goes underground: Mechanisms through which plant roots modify drought effects belowground

International Symposium 'Plant-soil feedback - Linkages between root traits and soil biota' 7 March 2019, Wageningen, the Netherlands

Climate change goes underground: How plants modify soil microbial responses to drought

Invited speaker in session 'Frontiers of soil microbial ecology', ISME17, 12-17 August 2018, Leipzig, Germany

The root to stability: The role of plant roots in ecosystem response to climate change

BBSRC Council, 29 June 2017, London

The root to stability: The role of plant roots in ecosystem response to climate change

BBSRC Fellows Conference, 13-14 June 2017, Leeds

Careers in academia

Speaker on career panel with moderator Stephen Curry. Naturejobs Career Expo, 16 September, London

Going underground: How plant roots modify belowground response to drought

Keynote speaker at Annual Soil Security Programme conference 6-7 September 2016, Reading

Plant-microbial linkages and N retention	Invited speaker “Elizabeth Kalko Lecture”, German Biodiversity Exploratory Assembly, 16-19 February 2016, Wernigerode, Germany
Plant-microbial linkages and N retention	Thematic Symposium ‘Ecological and evolutionary risks to agriculture and food production’, BES Annual Meeting 2016, 12-16 December 2016, Edinburgh
Going underground: the role of plant roots in ecosystem response to climate change	Keynote speaker, Rhizosphere4, 21-24 June 2015, Maastricht, the Netherlands
The secret life of soils	Pecha kucha presentation, ‘Towards and ecology-intensive agriculture’, 21 April 2015, Amsterdam, the Netherlands
Moving from temporary to permanent contracts in academia	BES webinar ‘Research Careers: Working Towards a Permanent Contract’ 20 March 2015
Going underground: ecosystem functioning under global change	Symposium ‘The search for tipping points in heterogeneous landscapes’ 14 November 2013, Wageningen, the Netherlands
Why and how to apply for grants	BES Grants Workshop, INTECOL 2013, 19-23 August, London, UK
Harnessing soil communities for N retention	Thematic Symposium ‘Integrating soil biodiversity into discussions of global sustainability: the time is now’ Annual Meeting of the Ecological Society of America, 5-9 August 2013, Minneapolis, USA
A career in academia – do’s and don’ts	PhD career event ‘Unlocking your potential’ BES Annual Meeting 2012, 17-20 December 2012, Birmingham
The weakest link? Soil food webs under stress – implications for ecosystem functioning	PhD course Soil Ecology, 18-23 November 2012, Wageningen, the Netherlands
Land use alters the resistance and resilience of soil food webs to drought	Microbial Community Dynamics: Cooperation and Competition, Joint EU-US Workshop European-United States Task Force on Biotechnology Research, 5-7 November 2012, St. Louis, USA
Plant – soil food web interactions and climate change	Enhancing Biodiversity through Soil Management, IEEM Summer Conference, 13 June 2012, London, UK
Harnessing plant - soil food web interactions for ecosystem services	Waitrose Innovation Forum, 15 February 2012, Royal College of Surgeons of England, London, UK
Grasslands and nitrogen retention	Carbon Storage in UK Grasslands, Defra Project Stakeholder Workshop, 6 October 2011, Colt Park, Ingleton National Nature Reserve, UK
Above-belowground linkages for optimizing N retention	Food Security: Crop Production and Resource use, 7-11 September 2011, Beijing, China

Fungal fields forever – How fungal-dominated soil food webs secure the delivery of ecosystem services	Environmental Sciences Seminars, 21 January 2011, Bangor University, UK
The young/ (relatively) inexperienced referee	Refereeing workshop, BES Annual Meeting 2010, 7-9 September 2010, Leeds, UK
Soil microbes and nitrogen losses	Nitrogen workshop, 5 May 2010, Lancaster University, Lancaster, UK
Soil fungi and nitrogen cycling	Biodiversity and Conservation seminar series, 18 February 2010, Universidad Rey Juan Carlos, Mostoles, Spain
Using stable isotopes to study plant-soil feedbacks	Annual Meeting Defra Grassland Assessment Unit, 29 April 2009, Sandy, UK
Nitrogen dynamics and F/B ratios	Nutrient Management workshop, 7 November 2007, Wageningen, the Netherlands

Chairing and organising conferences, sessions, and workshops

Annual Meeting of the Plants, Soils, Ecosystems special interest group of the BES, 6-7 April 2016, London	Organiser
'Ecosystems and Climate Change Mitigation' joint conference organised by Plants, Soils, Ecosystems and Climate Change Ecology special interest groups of the BES, 2-3 November 2015, London	Organiser and chair
Plants, Soils, Ecosystems Sequencing metaanalysis workshop, 18-20 May 2015, Manchester	Organiser
'Welcome to the dark side – Opportunities, challenges, and solutions for synthesizing global soil biodiversity' special session at the joint BES-SFE Annual Meeting, 9-12 December 2014, Lille, France	Organiser and chair
'Living apart together: linkages between plants and soil organisms and their implications for ecosystem functioning' session at GSBI conference, 1-4 December 2014, Dijon, France	Organiser
'Digging deeper: Research challenges in plant-soil interactions'. First meeting of the BES special interest group Plants, Soils, Ecosystems, 2-3 October 2013, Charles Darwin House, London	Organiser and chair
Aboveground – belowground interactions session, INTECOL 2013, 18-23 August 2013, London	Chair
Publishing Forum, Faculty of Life Sciences, 14 June 2013, The University of Manchester, Manchester	Organiser
SIBAE2013 – DON workshop, 29 April – 1 May 2013, Storrs Hall, Windermere	Scientific committee
Aboveground – belowground interactions session,	Chair

BES Annual Meeting 2012, 17-20 December 2012,
Birmingham

Biodiversity and Ecosystem Function session, Chair
BES Annual Meeting 2011, 12-14 September 2011,
Sheffield

Reviewing workshop, Lancaster Environment Centre, Organiser
1 April 2011, Lancaster University, Lancaster

Invited participation in scientific and policy workshops

- 2018 iDiv workshop “From predictive modelling to global scale monitoring of soil biodiversity and ecosystem function dynamics” 11-14 September 2018, Leipzig, Germany
- 2017 sDiv workshop “A global soil biodiversity database and its application to data synthesis and theory development”, 14 – 17 March and 13 – 16 November 2017, Leipzig, Germany
- 2016 Microbiology Society microbiome stakeholder workshop, 20 October 2016, Manchester
- 2014 sDiv workshop “A framework to improve our understanding of the distribution of global soil biodiversity: establishing the first quantitative analysis”, 31 March – 4 April 2014, Leipzig, Germany
- 2012 Microbial Community Dynamics: Cooperation and Competition, Joint EU-US Workshop European-United States Task Force on Biotechnology Research, 5-7 November 2012, St. Louis, USA
- 2011 Carbon Storage in UK Grasslands, Defra Project Stakeholder Workshop, 6 October 2011, Colt Park, Ingleton National Nature Reserve, UK

Impact, outreach, and media

- 2019 My speech at the L'Oréal Foundation breakfast debate (curated by the New York Times), was featured in El País
https://elpais.com/elpais/2019/03/14/ciencia/1552558928_779129.html
- 2018 De Vries et al. (2018) featured in ‘Women killin’ it in sustainability research’ of The University Network: <https://www.tun.com/blog/women-killin-it-sustainability-research/>
- 2017 Ramirez et al. (2017) featured in Dutch radio show Nieuws en Co (Radio 1), 27 November 2017
- Ramirez et al. (2017) featured in Dutch BNR podcast, 21 November 2017:
<https://www.bnr.nl/podcast/wetenschap-vandaag/10333835/de-ene-grond-is-de-andere-niet>
- Commented on Nature Communications paper in New Scientist:
https://www.newscientist.com/article/2123762-raindrops-make-soil-bacteria-take-off-and-fly-through-air/?utm_campaign=RSS|NSNS&utm_source=NSNS&utm_medium=RSS&utm_content=health&campaign_id=RSS|NSNS-health
- 2016 As part of the 500womenscientists.org initiative:
Article on BBC website <http://www.bbc.co.uk/news/science-environment-38094016>
Interview on BBC World’s The Science Hour, Saturday 26 November 2016

2016

Organisation and set up of exhibition 'Allotment of the future' for European City of Science Manchester 2016, St Annes Square, Manchester. We built two large (1.50m x 1m x 0.5m) soil profiles for display in the city centre of Manchester



Commented on Science paper in The Atlantic:

<http://www.theatlantic.com/science/archive/2016/04/the-wood-wide-web/478224/>

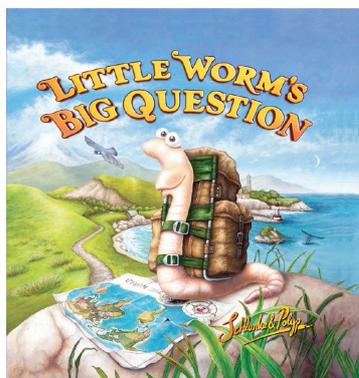
Contributed response to the National Soil Health Inquiry

<http://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/inquiries/parliament-2015/soil-health/>

and the resulting Soil Health report

<http://www.publications.parliament.uk/pa/cm201617/cmselect/cmenvaud/180/180.pdf>

Scientific advisor for 'Little Worm's Big Question' by Eva Schlunke and Paul Fitzgerald, New Internationalist, 2016.



2015

Commented on PNAS paper on BBC Radio Hereford and Worcester on 6 November 2015:

<http://www.pnas.org/content/early/2015/10/23/1502549112.abstract>

Contributed to LWEC Biodiversity Climate Change Impacts Report Card 2015

<http://www.nerc.ac.uk/research/partnerships/lwec/products/report-cards/biodiversity/>

Contributed to Sutherland, W.J, L. Dicks, N. Ockendon, and R.K. Smith (2015) *What Works in Conservation 2015*. Open Book Publishers, Cambridge, UK.

<http://dx.doi.org/10.11647/OBP.0060>

2013

Participated in knowledge exchange event aimed at Cumbrian farmers, sponsored by the British Ecological Society and the Ecosystems Knowledge Network

Article in European Commission Science for Policy News Alert about De Vries et al. (2013):
<http://ec.europa.eu/environment/integration/research/newsalert/newsalert.htm> (direct download)

<http://ec.europa.eu/environment/integration/research/newsalert/pdf/349na6.pdf>

Article in Farming Monthly September 2013 (page 14-15) about De Vries et al. (2013):
http://issuu.com/farmingmonthly/docs/september_2013_farming_monthly_nati/1

Article on German Food Safety Agency website (in German) about De Vries et al. (2013):
<http://www.aid.de/presse/archiv.php?mode=beitrag&id=6594>

De Vries et al. (2006) featured in the national Dutch A-level (VWO) biology exam (taken by ~25,000 students)

Article in bionieuws about the work featuring in the national Dutch A-level exam (bionieuws 8 June 2013, page 13): <http://www.bionieuws.nl>

2013-present Blog 'frantecologist' <https://franciskadevries.wordpress.com>
Average monthly views ~ 400, peak monthly views 2,289