

# Renske Jongen

📍 Sydney, Australia

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## Education

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**July 2021 - present**

**PhD candidate**

*The University of Sydney – Sydney, Australia*

Using plant-sediment feedbacks to aid seagrass restoration in the face of climate change.

**September 2014 – January 2018**

**MSc (Environmental Biology)**

*Utrecht University – Utrecht, The Netherlands*

Specialisation: Behavioural Ecology

**September 2011 – July 2014**

**BSc (Biology)**

*Utrecht University – Utrecht, The Netherlands*

## Research experience

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**February 2018 – July 2021**

**Research assistant**

*Netherlands Institute of Ecology (NIOO-KNAW) – Wageningen, The Netherlands*

Research topic: Steering soil biotic communities to improve restoration and resilience against climate change.

**October 2017 – December 2017**

**Literature review**

*Wageningen Marine Research – Den Helder, The Netherlands*

Thesis title: The contribution of sunscreen to additional eutrophication of the coastal zone at Lac Bay, Bonaire.

**October 2016 – September 2017**

**Master thesis**

*The University of Adelaide – Adelaide, Australia*

Thesis title: The effects of ocean warming and acidification on the foraging behavior of the eight most common mangrove- and salt marsh associated juvenile fish species of Gulf Saint Vincent, South Australia.

**October 2015 – September 2016**

**Research assistant**

*Netherlands Institute of Ecology (NIOO-KNAW) – Wageningen, The Netherlands*

Research topic: The causes and consequences of variation in life-history traits in response to anthropogenic changes.

**January 2015 – September 2016**

**Master thesis**

*Netherlands Institute of Ecology (NIOO-KNAW) – Wageningen, The Netherlands*

Thesis title: The effects of climate change on the phenology of the winter moth (*Operophtera brumata*).

April – May 2014

**Bachelor thesis**

*Utrecht University – Utrecht, The Netherlands*

Thesis topic: The leaf morphological response of dwarf birch (*Betula nana*) to simulated future climate conditions in West Greenland.

## Research funding

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July 2022

**Holsworth Wildlife Research Endowment**

AUD 4,665

March 2022

**The William Macleay Microbiological Research Fund**

AUD 1,000

January 2022

**The Marine Studies Institute (MSI) Ruhm award in Marine Ecology**

AUD 5,871

July 2021

**International Australian Government Research Training (RTP) scholarship**

Tuition fee offset, and living costs stipend for 3.5 years valued at AUD 124,000

October 2016

**Stichting fonds dr. Christine Buisman**

A €300 student scholarship to facilitate my master thesis at the University of Adelaide

October 2016

**Fundatie van de Vrijvrouwe van Renswoude**

A €1000 student scholarship to facilitate my master thesis at the University of Adelaide

## Courses/workshops

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February 2019

**Bioinformatics introduction course**

A basic introduction to Linux including an introduction to the Shell, navigating through and working with files and directories, pipes and executing shell scripts. I also got an introduction into performing a quality control of next generation sequencing data and learned how to read and analyze the reports.

October 2020

**Workshop: communication with non-experts**

In this workshop I learned how to present a scientific subject to non-experts to set-up collaborations with companies, NGOs and other societal organizations.

## Teaching and supervision

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November 2019

**Masterclass Living Soils - Wageningen**

Invited speaker

November 2018

**Masterclass Living Soils - Wageningen**

Invited speaker

May 2018 - February 2019

Daily supervisor of four research assistants (G. Vianny, L. Vandionant, S. Hofhuis, I. Keesmaat). Advised on proper lab protocols and supervised them during fieldwork, greenhouse work, and molecular laboratory work.

- November 2015 - March 2016** Assistant supervisor of two higher professional education (HBO) students (C. Jak and I. van der Mond). Assisted with and advised on field and lab work.
- April 2015 - March 2016** Assistant supervisor of two secondary vocational education (MBO) students (B. Derksen and C. Rodrigues). Advised on proper lab protocol, assisted with field and lab work, reviewed the internship reports and discussed future career aspirations.

## Outreach activities

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- March 2022 - present** Demonstrator for the Tea Composition program of The University of Sydney: teaching students from year 5-10 about soil decomposition and its relation to local soil type, properties and environments, using tea bags.
- June 2022** Blogpost for the British Ecological Society in celebration of Pride Month: <https://bit.ly/39Alb9E>
- September 2020** Article for the newsletter of Maasheggen UNESCO: <https://www.maasheggenunesco.com/nl/actueel/07-09-2020-onderzoek-naar-insecten-in-maasheggen>
- October 2019** I organized an activity for children to explain and show them my project at NIOO-KNAW.
- September 2019** I shot and edited a promotional video for an open day activity that I organized for NIOO-KNAW.

## Conferences/presentations

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- March 2016** **International symposium Future of Butterflies in Europe - Wageningen**  
Poster presentation

## Skills

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- **Languages:** Dutch (native), English (fluent), German (basic), Italian (basic), Spanish (basic)
- **Research management:** supervision of research assistants and undergraduate students, leading role in Master thesis research collaboration, management of group project activities.
- **Field:** experimental design, planning, execution and analysis of field surveys and experiments in temperate ecosystems. Experience in soil and plant sampling, plant-soil feedback experiments, decomposition experiments, seine netting and scuba diving. Experience with 4x4 off-road driving. Able to work well and independently under challenging field conditions in remote areas.
- **Greenhouse:** experimental design and execution of experiments to study plant-soil interactions, decomposition experiments, drought experiments.
- **Lab:** Basic lab skills (i.e. drying, grinding, weighing of soil and vegetation samples), molecular analyses of animal tissue/soil/plant material (DNA isolation, PCR, library preparation), chemical extraction and analyses of plant and soil material (ICP-OES, Autoanalyzer and microplate reader analyses), maintenance of large saltwater mesocosms.
- **Statistics:** Familiar with R-scripting and use of various packages and tests (e.g. general and generalized linear models, mixed models, ggplot2).
- **Software:** Word, Excel, PowerPoint, iMovie, Solomon coder, ImageJ, WinRhizo.

## Publications

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De Long, J. R., Heinen, R., Hannula, S. E., **Jongen, R.**, Steinauer, K., & Bezemer, T. M. (2022). Plant-litter-soil feedbacks in common grass species are slightly negative and only marginally modified by litter exposed to insect herbivory. *Plant and Soil*, 1-18

Huberty, M., Steinauer, K., Heinen, R., **Jongen, R.**, Hannula, S.E., Choi, Y.H., & Bezemer, T.M. (2022). Temporal changes in plant soil feedback effects on microbial networks, leaf metabolomics and plant-insect interactions. *Journal of Ecology*, 00, 1–1

Heinen, R., Thakur, M. P., Hiddes De Fries, J. R., Steinauer, K., Vandenbrande, S., **Jongen, R.**, & Bezemer, T. M. (2022). Foliar herbivory on plants creates soil legacy effects that impact future insect herbivore growth via changes in plant community biomass allocation. *Functional Ecology*, 00, 1-16

**Jongen, R.**, Hannula, S. E., Jonathan, R., Heinen, R., Huberty, M., Steinauer, K., Bezemer, T. M. (2021). Plant community legacy effects on nutrient cycling, fungal decomposer communities and decomposition in a temperate grassland. *Soil Biology and Biochemistry*, 108450

Hannula, S.E., Heinen, R., Huberty, M., Steinauer, K., De Long, J.R., **Jongen, R.**, Bezemer, T.M. (2021) Persistence of plant-mediated microbial soil legacy effects in soil and inside roots. *Nature Communications* 12, 5686

Gomes, S.I.F., Kielak, A.M., Hannula, S.E., Heinen, R., **Jongen, R.**, Keesmaat, I., De Long, J.R., Bezemer, T.M. (2020). Microbiomes of a specialist caterpillar are consistent across different habitats but also resemble the local soil microbial communities. *Animal Microbiome* 2, 37

Steinauer, K., Heinen, R., Hannula, S.E., De Long, J.R., Huberty, M., **Jongen, R.**, Wang, M., Bezemer, T.M. (2020). Above-belowground linkages of functionally dissimilar plant communities and soil properties in a grassland experiment. *Ecosphere*, 11 (9)

De Long, J.R., Heinen, R., **Jongen, R.**, Hannula, S.E., Huberty, M., Kielak, A.M., Steinauer, K. Bezemer, T.M. (2020). How plant-soil feedback maternal effects influence the next generation. *Ecological Research*, 1-13

Heinen, R., Steinauer, K., De Long, J.R., **Jongen, R.**, Biere, A., Harvey, J.A., Bezemer, T.M. (2020). Exogenous application of plant hormones in the field alters aboveground plant-insect responses and belowground nutrient availability, but does not lead to differences in plant-soil feedbacks. *Arthropod-Plant Interactions*, 1-12

Heinen, R., Hannula, S.E., De Long, J.R., Huberty, M., **Jongen, R.**, Kielak, A.M., Steinauer, K., Zhu, F. & Bezemer, T.M. (2020). Plant community composition steers grassland vegetation via soil legacy effects. *Ecology Letters*, 23(6), 973-982

De Long, J.R., Heinen, R., Steinauer, K., Hannula, S. E., Huberty, M., **Jongen, R.**, Vandenbrande, S., Wang, M., Zhu, F., Bezemer, T.M. (2019). Taking plant-soil feedbacks to the field in a temperate grassland. *Basic and Applied Ecology*, 40, 30-42

Hannula, S.E., Kielak, A.M., Steinauer, K., Huberty, M., **Jongen, R.**, De Long, J.R., Heinen, R., Bezemer, T.M. (2019). Time after time: Temporal variation in the effects of plant species and plant functional groups on soil bacterial and fungal communities. *mBio* 10(6)