

Eva Boon  
Other Scientific Staff  
Weissing group



## Research interests

I look at inference in biological and cultural evolution. I combine insights from philosophy of science with the expertise I acquired as a researcher in biology to ask how epistemic constraints shape the kinds of questions we ask in evolutionary sciences.

My work in biology centred on the use of genome information to delineate and study biological entities. As such, I worked in marine biology, speciation and population genetics, fungal genomics, microbial ecology and human microbiomics.

## Employment

### Guest researcher

Other Scientific Staff

Weissing group

University of Groningen

1-Sept-2022 → 1-Dec-2023

## Research outputs

### Foundations of cultural evolution: Introduction

Boon, E., van den Berg, P., Molleman, L. & Weissing, F. J., 5-Jul-2021, In: *Philosophical Transactions of the Royal Society B: Biological Sciences*. 376, 1828, 20200041.

Considering intra-individual genetic heterogeneity to understand biodiversity

Boon, E., 9-Apr-2019, *From Assessing to Conserving Biodiversity*. Casetta, E., Marques da Silva, J. & Vecchi, D. (eds.). Springer, p. 219-232 14 p. (History, Philosophy and Theory of the Life Sciences; vol. 24).

A remarkable journey: the story of evolution

Boon, E., 21-Dec-2016, In: *International Studies in the Philosophy of Science*. 30, 1, p. 88-90 3 p.

### BioMiCo: A supervised Bayesian model for inference of microbial community structure

Shafiei, M., Dunn, K. A., Boon, E., MacDonald, S. M., Walsh, D. A., Gu, H. & Bielawski, J. P., 2015, In: *Microbiome*. 3, 8, p. 1-15 15 p.

### Studying genome heterogeneity within the arbuscular mycorrhizal fungal cytoplasm

Boon, E., Halary, S., Baptiste, E. & Hijri, M., 2015, In: *Genome Biology and Evolution*. 7, 2, p. 505-521 17 p.

### Allelic differences within and among sister spores of the arbuscular mycorrhizal fungus *Glomus etunicatum* suggest segregation at sporulation

Boon, E., Zimmerman, E., St-Arnaud, M. & Hijri, M., 2013, In: *PLoS ONE*. 8, 12

Interactions in the microbiome: communities of organisms and communities of genes: Communities of organisms and communities of genes

Boon, E., Meehan, C. J., Whidden, C., Wong, D. H. J., Langille, M. G. I. & Beiko, R. G., 2013, In: *FEMS Microbiology Reviews*. 38, p. 90-118 29 p.

### The evolution of inter-genomic variation in arbuscular mycorrhizal fungi

Boon, E., 2012

Molecular biodiversity of arbuscular mycorrhizal fungi in trace metal-polluted soils  
Hassan, S. E. D., Boon, E., St-Arnaud, M. & Hijri, M., 2011, In: *Molecular Ecology*. 20, 16, p. 3469-3483 15 p.

Intra-isolate genome variation in arbuscular mycorrhizal fungi persists in the transcriptome  
Boon, E., Zimmerman, E., Lang, B. F. & Hijri, M., 2010, In: *Journal of Evolutionary Biology*. 23, 7, p. 1519-1527 9 p.

The flow of antimicrobial peptide genes through a genetic barrier between *Mytilus edulis* and *M. galloprovincialis*  
Boon, E., Faure, M. F. & Bierne, N., May-2009, In: *Journal of Molecular Evolution*. 68, 5, p. 461-474 14 p.

Mark-recapture cloning: a straightforward and cost-effective cloning method for population genetics of single-copy nuclear DNA sequences in diploids

Bierne, N., Tanguy, A., Faure, M., Faure, B., David, E., Boutet, I., Boon, E., Quere, N., Plouviez, S., Kemppainen, P., Jollivet, D., Moraga, D., Boudry, P. & David, P., Jul-2007, In: *Molecular Ecology Notes*. 7, 4, p. 562-566 5 p.

**Low effective population size and evidence for inbreeding in an overexploited flatfish, plaice (*Pleuronectes platessa* L.)**  
Hoarau, G., Boon, E., Jongma, D. N., Ferber, S., Palsson, J., Van der Veer, H. W., Rijnsdorp, A. D., Stam, W. T. & Olsen, J. L., 7-Mar-2005, In: *Proceedings of the Royal Society of London. Series B, Biological Sciences*. 272, 1562, p. 497-503 7 p.

## Activities

### **Lorentz Center Public Event - Does culture evolve?**

Franjo Weissing (Organiser), Eva Boon (Organiser) & Krist Vaesen (Organiser)  
5-Apr-2019

### **Lorentz Center Workshop - Probing the foundations of cultural evolution**

Franjo Weissing (Organiser), Eva Boon (Organiser), Lucas Molleman (Organiser) & Piet van den Berg (Organiser)  
1-Apr-2019 → 5-Apr-2019

### **ozsw conference 2017**

Eva Boon (Organiser)  
10-Nov-2017 → 11-Nov-2017

### **OZSW Debate 2017**

Eva Boon (Organiser)  
19-Oct-2017

### **On the nature of variation**

Eva Boon (Invited speaker)  
3-Oct-2017 → 4-Oct-2017

### **European Society for Philosophy of Science 2017**

Eva Boon (Chair)  
6-Sept-2017 → 9-Sept-2017

### **Function and Biological Explanation**

Eva Boon (Invited speaker)  
25-Jul-2017

### **Can Biological Practice Inform Metaphysics?**

Eva Boon (Invited speaker)  
16-Jun-2017

**Biology & Philosophy (Journal)**

Eva Boon (Peer reviewer)

2017 → ...

**International Studies in the Philosophy of Science (Journal)**

Eva Boon (Peer reviewer)

2016 → ...

**Molecular Ecology (Journal)**

Eva Boon (Peer reviewer)

2014 → ...

**Conflating Correlation and Causation in Microbiomics**

Eva Boon (Invited speaker)

7-Dec-2013

**ISME Journal (Journal)**

Eva Boon (Peer reviewer)

2013 → ...

**Molecular Biology and Evolution (Journal)**

Eva Boon (Peer reviewer)

2008 → ...

**Prizes****NASPGHAN Foundation Young Investigator Development Award**

Boon, Eva (Recipient), 2013

**Prix d'Excellence de Département des Sciences Biologiques**

Boon, Eva (Recipient), 2008

**Vanier Canada Graduate Scholarship**

Boon, Eva (Recipient), 2009

**Press/Media****Het Experiment: Afvallen met Bacteriën**

Eva Boon

02/08/2017

1 Media contribution

**MARM - Modelling adaptive response mechanisms**

Franz Weissing, Timo van Eldijk, Christoph Netz, Apu Ramesh, Jakob Gismann, Ben Kawam & Eva Boon

03/02/2021

1 Media contribution

**When Science Gets Overhyped**

Eva Boon

13/12/2013

1 item of Media coverage