

# CURRICULUM VITAE of Simon Bahrndorff

## PERSONAL INFORMATION

Name: **Simon Bahrndorff**

Date of birth: 14/06/1978; married, two children (8 and 10 years). Paternity leave: 6 months. Leave from research: I have been employed for two years in a private company as an advisor during which I did not conduct research.

URL for web sites: <http://personprofil.aau.dk/130668>

Google scholar profile: <https://scholar.google.dk/citations?user=9vhkOnQAAAAJ&hl=da>

ORCID ID #: [orcid.org/0000-0002-0838-4008](http://orcid.org/0000-0002-0838-4008)



## Research interest and qualifications

My research interest is on invertebrates and their applied use. Further, I have focussed on adaptive responses to environmental and biological stress. I use both a mechanistic and evolutionary approach to address this. The results have resulted in several highly cited publications and are widely respected by colleagues. These results have also been highlighted by leading journals (Emerging Infectious Diseases) and media (Ecological Society of America).

## Education and degrees

2004 - 2008: **Ph.D.**, Ecology and Genetics, Aarhus University, Denmark

2002 - 2004: **M.Sc.**, Ecology and Genetics, Aarhus University, Denmark, carried out at CESAR, LaTrobe University, Melbourne, Australia.

2001 - 2002: **B.Sc.**, Ecology and Genetics, Aarhus University, Denmark, carried out at Phuket Marine Biological Research Centre, Phuket, Thailand.

## Current position

2016 - **Associate Professor**, Department of Chemistry and Bioscience, Aalborg University.

## Previous positions

2013 - 2016 **Assistant Professor**, Department of Chemistry and Bioscience, Aalborg University.

2012 - 2013 **Postdoc**, National Food Institute, Technical University of Denmark.

2010 - 2011: **Postdoc**, National Veterinary Institute, Technical University of Denmark.

2008 - 2008: **Postdoc**, Vrije Universiteit, Amsterdam, the Netherlands and the National Environmental Research Institute, Aarhus University, Denmark.

2008 - 2008: Employed as **short term teacher** at Aarhus University, Denmark.

## Working experience

2008 - 2010: **Advisor** at the Danish Agricultural Advisory Service Centre, Aarhus, Denmark.

## Project leadership experience (PI)

I have been PI on several national and international projects that have involved both research institutions and private industries. **Projects include:** “Flies and food safety: Vector competence of the housefly (*Musca domestica*) for transmission of *Campylobacter* to poultry” (grant 11-116256) and “Lifecycle assessment of poultry” (J.nr.: 3412-09-02433).

## Grants received (in total ~13,5MDKK) (selected)

**Danish Agency for Science Technology and Innovation** (co-PI, 2018, 2.59 MDKK, number: 8021-00014B); **Aage V. Jensen Naturfond** (co-PI, 2017, 5.15 MDKK); **Aalborg Zoo Conservation Foundation (AZCF)**, 2014, 20.000 DKK; **Danish Agency for Science Technology and**

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**Innovation** (PI, 2011, 3.74 MDKK, grant 11-116256); **European Science Foundation (ESF)**, 2011, 4.500 €; **The Royal Danish Academy of Sciences and Letters**, Niels Bohr travel grant, 2011, 10.000 DKK; **Fjerkræafgiftsfonden**, 2011, 100.000 DKK; **Fonden for Økologisk Landbrug**, 2011, 150.000 DKK; **The Danish Food Industry Agency** (J.nr.: 3412-09-02433), 2009, 1.85 MDKK; **European Science Foundation (ESF)**, 2007, 4.500 €.

### Supervision of students and examination

**Present:** Co-supervisor, **PhD student**, Natasja Krog Noer; **Master students:** Cecilie Marcussen and Julie Bruun Jensen.

**Past:** **Past:** 6 **M.Sc.** students, **2 PhD**, **1 postdoc**.

### Teaching experience (selected)

**Current:** Course coordinator and lecturer of Zoology (AAU) and lecturer of Global Change Biology (AAU). Project supervision: Experimental ecology and ecotoxicology (AAU), Naturforvaltning (AAU) and Field biology (AAU), Population biology (AAU). **Past:** lecture in Animal production, health and welfare (guest lecture) (AU).

### Research stays (selected)

**Simon Fraser University**, Vancouver, 12 months (2012-2013); **University of Zurich-Irchel**, 3 months (2012); **CreSA**, Bellaterra Barcelona, 2 months (2011); **Vrije Universiteit**, Amsterdam, 6 months (2007); **University of Cambridge** 1 month (2006); **LaTrobe University**, Centre for Environmental Stress and Adaptation Research, Melbourne, 18 months (2002-2003).

### Review activity (selected)

**Scientific papers:** Ecology and Evolution, FEMS Microbiology Ecology, International Journal of Genomics, Evolutionary Ecology, Scientific Reports, Journal of Thermal Biology, Polar Biology, Global Change Biology, Journal of Applied Ecology, Journal of Insect Physiology, Comparative Biochemistry and Physiology, Journal of Insect Science,

### Commissions of trust / Memberships of Scientific Societies

- **Reviewer for research councils:** The Israel Science Foundation (ISF), The International Foundation for Science (IFS), Marsden Fund (New Zealand), Netherlands Organization for Scientific Research (Research Council for Earth and Life Sciences).
- Opponent for 1 doctoral dissertations.
- Board representation OIKOS Denmark
- Board member of Aalborg Zoo Conservation Foundation

### Presentations at scientific meetings (last 10 years)

I have given talks and presented posters at more than 30 occasions within the **NorFa**, **ConGen**, **Thermadapt**, **CESAR**, **SEB**, **ISEPEP** and **CHRO**.

### International collaborations (selected)

**Prof. Jacintha Ellers**, Vrije; Universiteit; **Prof. Alan Tunnacliffe**, University of Cambridge; **Prof. Ary Hoffman**, University of Melbourne.

### Publications

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I have published 34 papers in international peer-reviewed journals (being first or last on 25) and 20 other articles including conference proceedings, popular articles and peer-reviewed reports and include highly cited publications. H-index=13; i10-index=19; total number of citations=662 (Google scholar).

### PUBLICATION LIST WITH 2017 IMPACT FACTORS AND GOOGLE SCHOLAR CITATIONS (ASSESSED 1/2 2019) IN PARENTHESIS:

- 1) Thermal acclimation and adaptation across populations in a broadly distributed soil arthropod  
Jensen, A., Alemu, T., Alemneh, T., Pertoldi, C., **Bahrndorff, S.** Functional Ecology.  
<https://doi.org/10.1111/1365-2435.13291>. (IF: 5.5; citations: 0).
- 2) Moghadam, N.N., Kurbalija, Z.N., Pertoldi, C., Kristensen, T.N., **Bahrndorff, S.** 2019.  
Effects of photoperiod on life-history and thermal stress resistance traits across populations of  
*Drosophila subobscura* Ecology and Evolution. <https://doi.org/10.1002/ece3.4945>. (IF: 2.3;  
citations: 0).
- 3) Stronen, A.V., Lacolina, L., Pertoldi, C., Tokarska, M., Sørensen, B.S., **Bahrndorff, S.**,  
Olenski, K., Kaminski, S., Nikolskiy, P. 2018. Genomic variability in the extinct steppe bison  
(*Bison priscus*) compared to the European bison (*Bison bonasus*). Mammal Research.  
<https://doi.org/10.1007/s13364-018-0387-8>. (IF: 1.3; citations: 0).
- 4) **Bahrndorff, S.**, de Jonge, N., Hansen, J.K., Lauritzen, J.M.S., Spanggaard, L.H., Sørensen,  
M.H., Yde, M., Nielsen, J.L. 2018. Diversity and metabolic potential of the microbiota  
associated with a soil arthropod. Scientific Reports. 8, 2491. (IF: 4.3; citations: 0).
- 5) Alemu, T., **Bahrndorff, S.**, Pertoldi, C., Hundera, K., Alemayehu, E., Ambelu, A. 2018.  
Development of a plant based riparian index of biotic integrity (RIBI) for assessing the  
ecological condition of highland streams in East Africa. Ecological Indicators: 87, 77-85. (IF:  
3.9; citations: 1).
- 6) Moghadam, N.N., Thorshauge, P.M., Kristensen, T.N., de Jonge, N., **Bahrndorff, S.**, Kjeldal,  
H., Nielsen, J.L. 2018. Strong response of *Drosophila melanogaster* microbiota to  
developmental temperature. Fly: 1-12. (IF: 1.2; citations: 7).
- 7) Alemu, T., Alemneh, T., Pertoldi, C., Ambelu, A., **Bahrndorff, S.** 2017. Cost and benefit of  
heat and cold hardening in a soil arthropod. Biological Journal of the Linnean Society. 122  
765-773 (Impact Factor (IF): 2.3; citations: 7).
- 8) MacLean, H.J., Kristensen, T.N., Overgaard, J., Sørensen, J.G., **Bahrndorff, S.** 2017.  
Acclimation responses to short-term temperature treatments during early life stages causes

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- long-lasting changes in spontaneous activity of adult *Drosophila melanogaster*. Online version. *Physiological Entomology*. 42(4) 404-411 (IF: 1.1; citations: 5).
- 9) Alemu, T., **Bahrndorff, S.**, Alemayehu, E., Ambelu, A. 2017. Agricultural sediment reduction using natural herbaceous buffer strips: a case study of the east African highland. *Water and Environment Journal*. Online version. 31(4) 522-527 (IF: 1.2; citations: 2).
- 10) Alemu, T., **Bahrndorff, S.**, Hundera, K., Alemayehu, E., Ambelu, A. 2017. Effect of riparian land use on environmental conditions and riparian vegetation in the east African highland streams. *Limnologica*: 66 1-11. (IF: 1.8; citations: 5).
- 11) **Bahrndorff, S.**, de Jonge, N., Skovgård, H., Nielsen, J.L. 2017. Bacterial communities associated with houseflies (*Musca domestica* L.) samples within and between farms. *PloS one*: 12(1), art. No.: e0169753. (IF: 2.8; citations: 11).
- 12) Pertoldi, C., **Bahrndorff, S.**, Novicic, Z.K., Rohde, P.D. 2016. The Novel Concept of “Behavioural Instability” and Its Potential Applications. *Symmetry*: 8, art. No.:135. (IF: 1.3; citations: 0).
- 13) Alemneh, T., Ambelu, A., **Bahrndorff, S.**, Mereta, S.T., Pertoldi, C. Zaitchik, B.F. 2017. Modeling the impact of highland settlements on ecological disturbance of streams in Choke Mountain Catchment: macroinvertebrate assemblages and water quality. *Ecological Indicators*: 73 452-459. (IF: 3.9; citations: 2).
- 14) Gill, C., **Bahrndorff, S.**, Lowenberger, C. 2016. *Campylobacter jejuni* in *Musca domestica*: an examination of survival and transmission potential in light of the innate immune responses of the house flies. *Insect Science*: 24(4) 584-598. (IF: 2.1; citations: 11).
- 15) **Bahrndorff, S.**, Alemu, T., Alemned, T., Nielsen, J.L. 2016. The microbiome of animals – implications for conservation biology. *International Journal of Genomics*: art. no.: 5304028 (IF: 1.9; citations: 43).
- 16) Pertoldi, C., Faurby, S., Loeschke, V. Thirstrup, J., Ruiz-Gonzales, A., Kjærsgaard, A., Manenti, T., **Bahrndorff, S.** 2016. A novel alternative to F-tests for ecological studies. *Ecological Indicators*: 67 484-490. (IF: 3.9; citations: 0).
- 17) **Bahrndorff, S.**, Gertsen, S., Pertoldi, C., Kristensen, T.N. 2016. Investigating thermal acclimation effects before and after a cold shock in *Drosophila melanogaster* using behavioural assays. *Biological Journal of the Linnean Society* 117 (2): 241-251. (IF: 2.5; citations: 8)

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- 18) **Bahrndorff, S.**, Michaelsen, T.Y., Jensen, A., Marcussen, L.F., Nielsen, M.E., Roslev, P. 2015. Automated swimming activity monitor for examining temporal patterns of toxicant effects on individual *Daphnia magna*. *Journal of Applied Toxicology*: 36(7) 896-902. (IF: 2.9; citations: 10)
- 19) Kjærsgaard, A., Blanckenhorn, W.U., Pertoldi, C., Loeschcke, V., **Bahrndorff, S.** 2015. Plasticity in behavioural responses and resistance to temperature stress in *Musca domestica*. *Animal Behaviour*: 99, 123–130. (IF: 3.1; citations: 18)
- 20) McCarthy, K., Kjærsgaard, A., **Bahrndorff, S.**, Schou, T.M., Manenti, T., Loeschcke, V., Pertoldi, C. (2015). The effect of social isolation on locomotor activity in the house flies (*Musca domestica*). *Journal of Insect Behaviour*: 28(3) 288-296. (IF: 1.0; citations: 11)
- 21) **Bahrndorff, S.**, Garcia, A.B., Vigre, H., Nauta, M., Heegaard, P.M.H., Madsen, M., Hoorfar, J., Hald, B. (2015). Intestinal colonization of *Campylobacter* spp. in broiler chickens in an experimental infection study. *Epidemiology and Infection*: 143(11) 2381-2389. (IF: 2.0; citations: 9)
- 22) **Bahrndorff, S.**, Gill, C., Lowenberger, C., Skovgård, H., Hald, B. (2014). The effects of temperature and innate immunity on transmission of *Campylobacter jejuni* (Campylobacterales: Campylobacteraceae) between life stages of *Musca domestica* (Diptera: Muscidae). *Journal of Medical Entomology* 51 (3), 670-677. (IF: 2.0; citations: 15)
- 23) Schou, T.M., Faurby, S., Kjærsgaard, A., Pertoldi, C., Loeschcke, V., Hald, B., **Bahrndorff, S.** (2013). Temperature and population density effects on locomotor activity of musca domestica (Diptera: Muscidae). *Environmental Entomology* 42 (6), 1322-1328. (IF: 1.6; citations: 12)
- 24) **Bahrndorff, S.**, Rangstrup-Christensen, L., Nordentoft, S., Hald, B. (2013). Foodborne disease prevention and broiler chickens with reduced *Campylobacter* infection. *Emerging Infectious Diseases*: 19(3) 425-430. (IF: 7.4; citations: 58) **(included as no. 1 in EID media highlights of the month in March 2013)**
- 25) Garcia, A.#, **Bahrndorff, S.#**, Hald, B., Hoorfar, J., Madsen, M., Vigre, H. (2012). Design and data analysis of experimental trials to test vaccine candidates against zoonotic pathogens in animals: the case of a clinical trial against campylobacter in broilers. *Expert Review of Vaccines* 11 (10), 1179-1188. (#equal first authors) (IF: 4.3; citations: 11)
- 26) **Bahrndorff, S.**, A. Kjaersgaard, C. Pertoldi, V. Loeschcke, T. Schou, H. Skovgard, and B. Hald. (2012). The effects of sex-ratio and density on locomotor activity in the house fly (*Musca domestica*). *Journal of Insect Science* 12, art. no.: 71. (IF: 1.3; citations: 17)

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- 27) **Bahrndorff, S.**, Loeschcke, V., Ellers, J. (2010). Genetic variation in heat resistance and HSP70 expression in inbred isofemale lines of the springtail *Orchesella cincta*. *Climate Research*: 43 41-47. (IF: 1.9; citations: 20)
- 28) **Bahrndorff, S.**, Mariën,J., Loeschcke,V., Ellers,J. (2009). Dynamics of heat-induced thermal stress resistance and hsp70 expression in the springtail, *Orchesella cincta*. *Functional Ecology*: 23(2) 233-239. (**Top cited article in FE of papers published in 2009**) (IF: 5.5; citations: 100)
- 29) **Bahrndorff, S.**, Loeschcke, V., Pertoldi, C., Beier, C., Holmstrup, M. (2009). The rapid cold hardening response of Collembola is influenced by thermal variability of the habitat. *Functional Ecology*: 23(2) 340-347. (IF: 5.5; citations: 50)
- 30) **Bahrndorff, S.**, Wise, M.J., Tunnacliffe, A., McGee, B., Holmstrup, M., Loeschcke, V. (2009). Bioinformatics and protein expression analyses implicate LEA proteins in the drought response of Collembola. *Journal of Insect Physiology*: 55(3) 210-217. (**Top cited article 2008-2010 in JIP**) (IF: 2.7; citations: 48)
- 31) **Bahrndorff, S.**, Petersen, S.O., Loeschcke, L., Overgaard, J., Holmstrup, M. (2007). Differences in cold and drought tolerance of high arctic and sub-arctic populations of *Megaphorura arctica* Tullberg 1876 (Onychiuridae: Collembola). *Cryobiology*: 55(3) 315-323. (IF: 2.1; citations: 39)
- 32) **Bahrndorff, S.**, Holmstrup, M., Petersen, H., Loeschcke, V. (2006). Geographic variation for climatic stress resistance traits in the springtail *Orchesella cincta*. *Journal of Insect Physiology*: 52(9) 951-959. (IF: 2.7; citations: 54)
- 33) **Bahrndorff, S.**, Ward, J., Pettigrove, V., Hoffmann, A. A. (2006). A microcosm test of adaptation and species specific responses to polluted sediments applicable to indigenous chironomids (Diptera). *Environmental Pollution*: 139 550-560. (IF: 4.4; citations: 29)
- 34) **Bahrndorff, S.** & Loefstedt, M. 2004. Commensal amphipods in ascidians and sponges off Phuket Island. *Phuket Mar. Biol. Cent. Res. Bull.* 65: 45-54. (Citations: 1)

### Reports and press releases:

- 35) **Press releases:** Ny undersøgelse: Danske kyllinger er klimavenlige, August, 2011.
- 36) **Reports (peer-reviewed):** Nielsen, N.I., Jørgensen, M., **Bahrndorff, S.** 2011. Greenhouse gas emission from the Danish broiler production estimated via LCA methodology. Aarhus, Denmark, pp. 1-30 (Citations: 17)

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37) **Press releases: Highlights: Emerging Infectious Diseases**, March 2013, Foodborne Disease Prevention and Broiler Chickens with Reduced Campylobacter Infection, Simon Bahrndorff et al. 2013.

### **Other publications (Non peer-reviewed): Other publ.: ≈20**

38) Mikkelsen, K.A., **Bahrndorff, S.** (2009). Afbrænding af fjerkrægødning. Dansk Erhvervsfjerkræ 9, 398-401.

39) Sørensen, J.G., **Bahrndorff, S.** (2008). Kolde kræ. Aktuel Naturvidenskab, 13-16.

40) **Bahrndorff, S.** (2008). Hvilken rolle spiller slagtekyllinger og ægproduktion i klimaforandringer og omvendt? Dansk erhvervsfjerkræ 9, 351-353.

### **41) Naturhistorier på Naturhistorisk Museums hjemmeside (selected):**

”Anstansdammer, chaperoner og klimaforandringer”; ”Global opvarmning og hvad så?”;

”Hvordan klarer dyr temperaturændringerne?”; ”Hvor forsvinder regnormene hen?”;

”Biodiversitet i jorden”; ”Hvordan klarer insekterne sig i den danske vinter?”;

”Vinterbørn”; ”Lidt varmere og lidt vådere - og hvad så?”; ”Når springhaler formerer sig”.