

Nico M. van Straalen
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Born : 27 November 1951, Berkhout, The Netherlands
Sex : male
Marital Status : married, two children

Education

1965-1970	secondary school: gymnasium b, College Hageveld, Heemstede
1970-1979	study Biology, Vrije Universiteit, Amsterdam specializations: biophysics, endocrinology, biomathematics, didactics

Appointments

1974-1978	student-assistant, Vrije Universiteit Amsterdam
1979-1982	PhD student, Netherlands Organization for Scientific Research (NWO)
1982-1988	lecturer, Vrije Universiteit Amsterdam
1988-1992	senior lecturer, Vrije Universiteit Amsterdam
1992-2017	full professor of Animal Ecology, Vrije Universiteit Amsterdam
2011-2012	dean, Amsterdam Graduate School of Life Sciences (0.2 fte)
2015-2017	vice dean for education, ad interim dean, Faculty of Science, Vrije Universiteit Amsterdam

Teaching

Courses

(*course leader, #significant contribution (> 30%))

- courses on Comparative Animal Morphology, Faunistics, Ecology, Population Biology (student-assistant)
- courses on Ecotoxicology for 3rd year Biology students (1989 – 1993)*
- summer course on physics for students entering the biology programme (1989 – 1994)*
- course on General Ecology for 1st year Biology and Medical Biology students (1990 – 1996)#
- course on Evolutionary Biology for 1st year Biology and Medical Biology students, including zoology and botany practicals (1995 – 2007)*
- course on Evolution and Diversity of Life for 1st year Biology students (2008 – present)#
- course on Health and Environment for 1st year students of Biomedical Sciences and Health Science (1997 – 2009)#
- courses on Human Evolution and Evolutionary Developmental Biology for 1st year students of Biomedical Sciences (2004 – present)*#
- course on Human Evolution optional for 3rd year Biology and Biomedical Science students (1999 – present)*
- course on Animal Physiology for 2nd year Biology students (2009 – present)*
- course on Spatial Ecology and Global Change for MSc Ecology students (2005 – 2014)#
- advanced PhD course “Principles of Ecological Genomics” (2006, 2009, 2011)
- honours course on the Origin of Life (2011 – present, biannually)*
- HOVO course on the Tree of Life (starting 2018)*
- invited lecturer for international advanced courses on Ecotoxicology, Soil Ecology and Ecogenomics (EERO, PHLO, University of Siena, University of Coimbra, Leira University)
- invited lecturer for a course on Big History (ISVW, 2015, 2016)
- course on human evolution for secondary school teachers (internet module, eWISE)
- course “The New Tree of Life” for 50+ (2018, HOVO, Amsterdam)

Awards

- awarded with the ABC Laboratories/SETAC-Europe Environmental Education Award (1998)
- best (student-elected) lecturer of faculty (2002)

Textbooks

- “Leerboek Oecotoxicologie (VU Uitgeverij, 1991, 1993), with J.A.C. Verkleij
- “An Introduction to Ecological Genomics” (Oxford University Press, 2006, 2nd 2012), with D. Roelofs
- “Evolueren wij nog?” (Amsterdam University Press, 2017), with D. Roelofs

Research

- 1979 – 1983: PhD study on comparative demography of Collembola populations (promotor: Prof.dr. E.N.G. Joosse, thesis defence 26 January 1983)
- 1983 – 1999: research on ecotoxicology, focusing on toxicity, kinetics, mode of action and adaptation in response to heavy metals and PAH in soil invertebrates (springtails, isopods, oribatids)
- 1999 – 2017: research on molecular stress ecology and ecological genomics, focusing on mechanisms of metal tolerance and induction of genome-wide stress responses in a model species of springtail
- applied and obtained research funds from various national and international organisations (NWO, VROM, STW, EERO, EU, NATO, WOTRO, BSik)
- registered EUROTOX toxicologist (Association of European Toxicologists and European Societies of Toxicology)
- member of the Faculty of 1000 – Biology (2008-2012)

Current research profile

- I supervise PhD students working in ecotoxicology, ecogenomics and evolution (with D. Roelofs and C.A.M. van Gestel).
- I am greatly interested in the evolution of body plans in the animal kingdom, phylogenetic reconstruction of the tree of life, and the origin of life, to support my teaching.
- I have a special interest in human evolution (paleontology, human genetic variation and human development).
- Running book projects
- “Soil Invertebrates; Kaleidoscope of Adaptations” (CRC Press, due end 2018)
- “Do Humans Still Evolve” (English translation of the Dutch textbook, due beginning 2019)
- “Evolueren wij nog?” (second edition of the Dutch textbook)
- “De nieuwe boom van het leven” (still embryonic)
- “Het geknutselde lichaam” (still embryonic)

Supervision of PhD students

(see separate list)

Co-promotor 2x, Promotor: 68x (up to 2017)

Administration and professional societies

In the university

- vice-dean for education, faculty of Science, Vrije Universiteit Amsterdam (2015 – 2017)
- head of department of Animal Ecology (1992 – 2014)
- director of the Department of Ecology and Ecotoxicology (1992-1998), and the Institute of Ecological Science (1998 – 2001)

- member of Biology Faculty Council, Vrije Universiteit (1990-1993)
- director of the interfaculty research institute Amsterdam Centre of Environmental Science (1995 – 2000)
- director of the BSc and MSc Biology programme at the Vrije Universiteit, Amsterdam (2006 – 2015)

National

- board member of the national Research School on Environmental Science (SENSE) (1995 – 2000)
- general director of the national Research School on Environmental Science (SENSE) (2001 – 2004)
- member of advisory committees: Netherlands Integrated Soil Research Programme (1990 – 1996), Dutch Research Programme on in situ Sanitation of Soils (1994 – 1997), Stimulation Programme on System-oriented Ecotoxicology (SSEO) (2002 – 2007)
- member and chair of the advisory Board for the Post-doctoral Education Programme in Toxicology (2005 – 2011)
- member of the Technical Soil Protection Committee (1988 – 1995)
- member of the Dutch Health Council (1992 – 2002)
- member of the registration committee of toxicology for the Netherlands Society of Toxicology (2003 – 2007)
- member of the scientific advisory board for the Institute of Wetland Research, Radboud University, Nijmegen (2006 – 2008)
- member of the Advisory board of the Institute of Risk Assessment Sciences (IRAS), University of Utrecht (2005 – 2009)
- chair of the peer review committee for the Centre for Environmental Science, Leiden (2006)
- co-ordinator for the Dutch Ecogenomics consortium (2004 – 2011)
- chair of the board of the Royal Dutch Zoological Society (2006 – 2012), chair of the BENELUX Congress of Zoology (2007)
- chair of the NWO programme Ecology Regarding Genetically Modified Organisms (ERGO) (2006 – 2012)
- member of the Biological Council KNAW (Biologische Raad) (2004 – 2007)
- member of the Council for Earth and Life Sciences KNAW (2008 – present)
- chair of the scientific advisory board for the Netherlands Institute of Ecology (NIOO – KNAW) (2007 – 2012)
- chair of the peer review committee for the Institute of Water and Wetland Research (IWWR, Radboud University Nijmegen) (2009)
- member of the scientific peer review committee for the Institute of Marine Research and Ecosystem Studies (Wageningen IMARES) (2009, 2013)
- member of the advisory board of Wageningen Marine Research
- chair of the board of the Netherlands Society for Toxicology (2012 – 2014)
- chair of the Agricultural Subcommittee of the Commission on Genetic Modification (COGEM) (2012 – present)
- member of the peer review committee for WIAS research school, Wageningen (2012)
- chair of the International Advisory Board of WIAS research school, Wageningen (2013 – present)
- member of the peer review committee for Naturalis Biodiversity Center, Leiden (2014)

International

- member of the SETAC-Europe Council (1988-1992), chair of the SETAC-Europe Education Committee (1990-1996)
- chair of the scientific committee for SETAC-Europe annual meetings (Sheffield, 1991, 350 delegates; Amsterdam, 1997, 700 delegates)
- member of the Ecotoxicity Advisory Panel of the International Lead Zinc Association, the International Copper Association and the Nickel Producers Environmental Research Association (1997 – 2000)
- advisor for the programme on Human and Ecological Risk Assessment on ingredients of household cleaning products (2001 -2005)
- member of the advisory boards of the National Environmental Research Institute, Denmark, the Environment Agency, United Kingdom, and the Institute of Environmental Sciences, Krakow, Poland
- member of the scientific committee of the SETAC-Europe congress, Barcelona, 3 -7 May, 2015
- member of the scientific committee of the XVth IUTOX congress, Maastricht, 2022

Congress lectures

- Invited for a key-note lecture on an international congress: ~38 times
- Invited for “outreach” lectures on evolution and ecology on countless occasions; special mention: science lecture at the Lowlands Festival (2012) <https://www.youtube.com/watch?v=OzmcO6e-XvU>

Reviewing

- Member of the editorial board and regular reviewer for the journals *Pedobiologia*, *Applied Soil Ecology* and *Environment International*
- Occasional reviewer for *Environmental Science and Technology*, *Environmental Toxicology and Chemistry*, *Ecotoxicology and Environmental Safety*, *Ecotoxicology*, *Australasian Journal of Ecotoxicology*, *Environmental Pollution*, *Water, Air and Soil Pollution*, *Science of the Total Environment*, *Chemosphere*, *Integrated Environmental Assessment and Management*, *Soil Biology and Biochemistry*, *European Journal of Soil Biology*, *Journal of Applied Ecology*, *Journal of Ecology*, *Functional Ecology*, *Oikos*, *Oecologia*, *Biological Reviews*, *Journal of Theoretical Biology*, *Entomologia experimentalis et applicata*, *Neotropical Entomology*, *Journal of Insect Physiology*, *Comparative Biochemistry and Physiology*, *Heredity*, *BMC Molecular Biology*, *BMC Genomics*, *Nature Reviews Genetics*

Activities with developing countries

- project officer for the “Biology Faculty Staff Development Programme” (Vrije Universiteit, UKSW, Salatiga, Indonesia) (1990-1996)
- coordinator of the MSc programme for students from South-East Asia at the Vrije Universiteit (1990-1996)
- project officer for the Biology part of the MHO-3 programme (Basic Science, Cantho University, Vietnam) (1996-2000)

Other international contacts

- participated in EU-funded projects with colleagues in Silkeborg (Dr. H. Løkke), Lund (Dr. S. Rundgren), Innsbruck (Dr. R. Dallinger), Monks Wood (Dr. J. Weeks), Coimbra (Dr. J.P. Sousa), Peniche (Dr. M. Lemos)
- collaborated with the All-Russian Research Institute of Nature Protection (Dr. R.O. Butovsky, Dr. A.D. Pokarzhevskii), supported by EERO, NATO and NWO
- consultant for FAO-project on side-effects of anti-locust insecticides, Dakar, Senegal (1999)
- supervision of joint PhD students from Satya Wacana Christian University, Salatiga (Indonesia), Soegijapranata Catholic University Semarang (Indonesia), University of Tanta (Egypt), Jagiellonian University, Krakow (Poland), Yokohoma National University (Japan), Abomey-Calavi University, Cotonou (Benin), University of Rennes (France), University of Coimbra (Portugal), Leira University (Portugal), University of Siena (Italy), Technical University of Istanbul (Turkey).
- invited opponent for PhD defences on countless occasions

Languages

- English: effective operational proficiency (CEF level C1, Oxford Quick Placement Test Result: 88 out of 100)
- French, German, Indonesian: a little

Five recent key publications

Faddeeva-Vakhrusheva, A., Kraaijeveld, K., Derks, M.F.L., Yahya Anvar, S., Agamennone, V., Suring, W., Kampfraath, A.A., Ellers, J., Le Ngoc, G., Van Gestel, C.A.M., Mariën, J., Smit, S., Van Straalen, N.M. & Roelofs, D. (2017) Coping with living in the soil: the genome of the parthenogenetic springtail *Folsomia candida*. *BMC Genomics*, 18, 493.

Janssens, T.K.S., Del Rio Lopez, R., Mariën, J., Timmermans, M.J.T.N., Montagne-Wajer, M., Van Straalen, N.M. & Roelofs, D. (2008) Comparative population analysis of metallothionein promoter alleles suggests stress-induced microevolution in the field. *Environmental Science and Technology*, 42, 3873-3878.

Suring, W., Meusemann, K., Blanke, A., Mariën, J., Schol, T., Agamennone, V., Faddeeva-Vakhrusheva, A., Berg, M.P., The 1KITE Basal Hexapod Consortium, Brouwer, A., Van Straalen, N.M. & Roelofs, D. (2017) Evolutionary ecology of beta-lactam gene clusters in animals. *Molecular Ecology*, 26, 3217-3229.

Van der Heijden, M.G.A., Bardgett, R.D., & Van Straalen, N.M. (2008) The unseen majority: soil microbes as drivers of plant diversity and productivity in terrestrial ecosystems. *Ecology Letters* 11, 296-310.

Van Straalen, N.M. & D. Roelofs (2006, 2012) *An Introduction to Ecological Genomics*. Oxford University Press, Oxford.

(complete list of publications, [see here](#))

Areas of special interest

- Ecological genomics (2nd ed. of textbook published 2012, International PhD course)
- Human evolution (Dutch textbook published 2017, public lectures, debate events)
- Weekly newspaper column (Noordhollands Dagblad) on various aspects of biology (evolution, toxicology, human behaviour)