

Curriculum vitae

Ulla Li Zweifel

January 2021

Academic achievements:

- 2002 Docent (Associate Professor) in Marine microbiology, University of Kalmar.
- 1995 Ph.D. Marine microbiology, Umeå University, Sweden.
- 1991 B.Sc. Chemistry, Umeå University, Sweden.

Professional positions:

- 2011- Scientific coordinator, Swedish Institute for the Marine Environment, University of Gothenburg, Sweden
- 2014-2017* Professional Secretary, Helsinki Commission (HELCOM)
- 2012-2012* International coordinator for the Marine Strategy Framework Directive, Swedish Agency for Marine and Water Management
- 2010-2011 Researcher at the Department of Cell- and molecular biology, University of Gothenburg, Sweden
- 1998-2005 Assistant Professor, Department of Biology and Environmental Science, Scientific editor and scientific advisor, Global International Waters Assessment (GIWA), UNEP, University of Kalmar, Sweden
- 1996-1998 Researcher at the department for Marine ecology and Microbiology, National Environmental Research Institute, Denmark
- 1995-1996 Visiting Scholar, Marine Biology Research Division, Scripps Institution of Oceanography, La Jolla, USA

*on leave of absence from the Swedish Institute for the Marine Environment

REPORTS

Published by the Swedish Institute of the Marine Environment:

- 2020** Sundblad, E-L., Grimvall, A. och **Zweifel, U.L.** Drivkrafter i samhället bakom belastningar på havsmiljön, Havsmiljöinstitutets rapport nr 2020:8

Published by the Swedish EPA and Swedish Agency of Marine and Water Management:

- 2013** **Zweifel, U.L.** et al. **Evaluation of Swedish grant investments to improve the state of the Baltic Sea, 2007-2012.** Swedish Agency of Marine and Waters Management, Report 2013:17. (In Swedish: Utvärdering av projektverksamheten av havs- och vattenmiljöanslaget 2007-2012, Havs- och vattenmyndighetens rapport 2013:17).

2012 Zweifel, U.L. et al. **Good environmental status 2020: Marine strategy for the North Sea and the Baltic Sea.** Swedish Agency of Marine and Waters Management, 2012:20. (In Swedish: God havsmiljö 2020. Marin strategi för Nordsjön och Östersjön. Havs-och vattenmyndighetens rapport 2012:20)

2008 Zweifel, U.L. **Marine synthesis – a review of knowledge on the Baltic Sea.** Swedish Environmental Protection Agency. (In Swedish: Marin syntes. En sammanställning över tillgänglig kunskap om våra hav. Naturvårdsverket, ISBN 91-620-5715-4).

Published by the Helsinki Commission:

2019 Henriette Schack, Marta Ruiz, Mathias Andersson, **Ulla Li Zweifel**, **Noise sensitivity of animals in the Baltic Sea.** Baltic Sea Environment Proceedings No. 167.

2018 Samuli Korpinen, **Ulla Li Zweifel**, François Bastardie, Daniël van Denderen, Kai Hoppe, Patrik Jonsson, Pirkko Kauppila, Marco Milardi, Rasmus Nielsen, Hans Nilsson, Katja Norén, Henrik Nygård, Mattias Sköld, Sebastian Valanko, Michael Zettler. **Estimating physical disturbance on seabed.** Baltic Sea Environment Proceedings No. 164.

2018 Samuli Korpinen, Marco Nurmi, Juuso Haapaniemi, Leena Laamanen, Henrik Nygård, Joni Kaitaranta, Henna Rinne, Kai Hoppe, Emilie Kallenbach, Ciarán Murray, Jesper Andersen, **Ulla Li Zweifel**, Lena Bergström. **HELCOM Thematic assessment of cumulative impacts on the Baltic Sea 2011-2016.** Baltic Sea Environment Proceedings No. 159.

2018 Henrik Nygård, Jesper Andersen, Lena Avellan, Lena Bergström, Sara Estlander, Vivi Fleming-Lehtinen, Jannica Haldin, Laura Hoikkala, Joni Kaitaranta, Samuli Korpinen, Georg Martin, Ciarán Murray, Sanna Suikkanen, Kaire Torn, Jana Wolf, **Ulla Li Zweifel**, **HELCOM Thematic assessment of biodiversity 2011-2016.** Baltic Sea Environment Proceedings No. 158.

2018 Avellan, L., Bergström, L., Hoikkala, L., Linderoth, M., Murray, C., Andersen, J., Danielsson, S., Nyberg, E., Porsbring, T., Mannio, J., Zweifel, U.L. and Rowe, O. **HELCOM Thematic assessment of hazardous substances 2011-2016.** Baltic Sea Environment Proceedings No.157.

2018 Lena Bergström, Heini Ahtiainen, Lena Avellan, Sara Estlander, Juuso Haapaniemi, Jannica Haldin, Laura Hoikkala, Marta Ruiz, Owen Rowe, **Ulla Li Zweifel** (eds), **State of the Baltic Sea – Second HELCOM holistic assessment 2011-2016.** Baltic Sea Environment Proceedings No. 155.

2018 **Ulla Li Zweifel**, Marta Ruiz, Susanna Kaasinen, Hermann Backer. **Implementation of the Baltic Sea Action Plan,** Baltic Sea Environment Proceedings No. 154.

2016 Borg, J., Kääriä, P., Zweifel, U.L. **Ecological coherence assessment of the Marine Protected Area network in the Baltic.** Baltic Sea Environment Proceedings. No. 148.

2012 Korpinen, S. and Zweifel U.L. (eds). **Development of a set of core indicators: Interim report of the HELCOM CORESET project PART A. Description of the selection process.** Balt. Sea Environ. Proc. No. 129A.

2012 Korpinen, S. and Zweifel U.L. (eds). **Interim report of the HELCOM CORESET project. PART B. Descriptions of the indicators.** Balt. Sea Environ. Proc. No. 129B.

- 2010** Andersen, J., Korpinen, S., Laamanen, M., Wolpers, U., Claussen, U., Durkin, M., Hasselström, L., Ljungberg, R., Meski, L., Murray, C., Reker, J., Soutukorva, Å., Stankiewicz, M., **Zweifel, U L. Ecosystem health of the Baltic Sea – A Holistic Assessment of environmental status in the Baltic-Sea 2003-2007.** Helsinki Commission. Balt. Sea Environ. Proc. No. 122.
- 2009** Zweifel, U.L. and Laamanen, M. (eds). **Biodiversity in the Baltic Sea – An integrated thematic assessment on biodiversity and nature conservation in the Baltic Sea.** Balt. Sea Environ. Proc. No. 116B.

BOOKS, BOOK CHAPTERS AND REVIEW ARTICLES:

- 2018** Laamanen, M., Korpinen, S., **Zweifel U.L.** and J.H. Andersen. Ecosystem-based management for the Baltic Sea: **What is a healthy ecosystem?** In: Biological Oceanography of the Baltic Sea, Springer.
- 2011** **Zweifel, U.L.. The Baltic Sea – an unwell Sea and roads towards recovery.** (published in Swedish: Östersjön – ett krassligt hav och vägar mot tillfrisknande). Gotlandsboken AB.
- 2001** Hagström, A., Azam, F., Kuparinen, J. And **Zweifel, U.L. Pelagic plankton growth and resource limitations in the Baltic Sea.** In: A systems analysis of the Baltic Sea. Springer, Berlin, Heidelberg

ARTICLES IN PEER-REVIEWED JOURNALS:

Nr of citations October 2020: 3440

- 2018** Hagström, Å., Azam, F., Berg, C. & **Zweifel, U. L. Isolates as models to study bacterial ecophysiology and biogeochemistry.** Aquatic Microbial Ecology, 80(1), 15-27
- 2017** Hagström, Å., Azam, F., Berg, C., and **Zweifel U.L.** Culture the Marine Microbiome, In AME SPECIAL 6, Progress and perspectives in aquatic microbial ecology: Highlights of the SAME 14, Uppsala, Sweden, 2015. Editors: Paul A. del Giorgio, Fereidoun Rassoulzadegan, Eva Lindström.
- 2012** **Zweifel, U L.,** Hagström, Å., Holmfeldt, K., Thyraug, R. Geels, C., Frohn, L.M., Skjøth , C.A. and U. Gosewinkel Karlson. **High bacterial 16S rRNA gene diversity above the atmospheric boundary layer,** 28: 481-498.
- 2012** Sjöstedt, J., Hagström, Å. and **UL. Zweifel. Variation in cell volume and community composition of bacteria in response to temperature.** Applied Microbial Ecology, 66:237-246.
- 2011** Fahlgren, C. Bratbak, G., Sandaa, R-A, Thyraug, R, and **U L. Zweifel. Diversity of airborne bacteria in samples collected using different devices for aerosol collection.** Aerobiologia. 27:107–120
- 2010** Fahlgren, C., Hagström, Å., Nilsson, D., and **U L. Zweifel. Annual variation of the diversity, viability and origin of airborne bacteria.** Applied Environmental microbiology, 76: 3015-3025.
- 2007** Thingstad, T.F., Havskum, H., **Zweifel, UL.** et al. **Control of bacterial growth under carbon and mineral nutrient limited conditions.** Comparison of idealized models with mesocosms manipulated with N and P, glucose-C, and Si.. J. Marine Systems. 64:15-34.
- 2007** Boström. K.H., Riemann, L., **Zweifel, UL.,** and Å. Hagström. **Nodularia sp. nifH gene transcripts in the Baltic Sea proper.** J. Plankton Research. 29:391-399.

- 2005** Simu, K., K. Holmfeldt, **U. L. Zweifel**, and Åke Hagström. **Culturability and coexistence of colony-forming and single-cell marine bacterioplankton.** *Appl. Environ. Microbiol.* 71:4793-4800.
- 2003** Pinhassi, J., Winding, A., Binnerup, S.J., **Zweifel, U.L.**, et al. **Spatial variability in bacterioplankton community composition at the Skagerrak-Kattegat Front.** *Marine Ecology Progress Series.* 255:1-13.
- 2003** Havskum, H., Thingstad, T.F., Scharek, R., Peters, F., Berdalet, E., Montserrat Sala, M., Alcaraz, M., Bangsholt, J.C., **Zweifel. U.L.**, et al. **Silicate and labile DOC interfere in structuring the microbial food web via algal-bacterial competition for mineral nutrients: Results of a mesocosm experiment.** *Limnology and Oceanography.* 48:129-140.
- 2002** Hagström, Å., Pommier, T., Dembinska, D., Rohwer, F., Simu, K. and **Zweifel, U L.** **Use of 16S rDNA for species delineation of marine bacterioplankton.** *Applied Environmental Microbiology.* 28:229-237.
- 2002** Johansen, J. F., Blackburn, N., Pinhassi, J., **Zweifel, U L.**, and Hagström, Å. **Large Variability in Motility Characteristics among Marine Bacteria.** *Aquatic Microbial Ecology.* 28:229-237.
- 2000** Hagström, Å., **U. L. Zweifel** and J. Pinhassi. **Marine bacterioplankton show bursts of rapid growth induced by substrate shifts.** *Aquatic Microbial Ecology,* 24:109-115.
- 2000** Hagström, Å., Pinhassi, J. and **Zweifel, U.L.**, **Biogeographical diversity among marine bacterioplankton.** *Aquatic Microbial Ecology,* 21:231-244.
- 1999** **Zweifel, U. L.** **Factors controlling accumulation of labile dissolved organic carbon in the Gulf of Riga.** *Estuarine costal and Shelf Science.* 48:357-370.
- 1999** Pinhassi, J., F. Azam, J. Hemphälä, R. A. Long, J. Martinez, U. L. **Zweifel** and Å. Hagström. **Coupling between bacterioplankton species composition, population dynamics, and organic matter degradation.** *Aquatic Microbial Ecology.* 17:13-26.
- 1999** Gasol, J. M., **U. L. Zweifel**, et al. **Significance of Size and Nucleic Acid Content Heterogeneity as Measured by Flow Cytometry in Natural Planktonic Bacteria.** *Applied and Environmental Microbiology,* 65:4475-4483.
- 1998** Thingstad, T. F., **Zweifel, U L.** and Rassoulzadegan, F. **P-limitation of heterotrophic bacteria and phytoplankton in the northwest Mediterranean.** *Limnology and Oceanography.* 43:88-94.
- 1997** Pinhassi, J., **Zweifel, U L.** and Hagström, Å. **Dominant marine bacterioplankton found among colony-forming bacteria.** *Applied Environmental Microbiology.* 63:3359-3366.
- 1996** Peltzer, E. T., Fry, B., Doering, P. H., McKenna, J. H., Norrman, B. and **Zweifel, U L.** **A Comparison of Methods for the Measurement of Dissolved Organic Carbon in Natural Waters.** *Marine Chemistry.* 54:85-96.
- 1996** **Zweifel, U L.**, et al. **Cycling of Marine Dissolved Organic Matter: I. An Experimental System.** *Aquatic Microbial Ecology.* 11:65-77.
- 1996** Blackburn, N., **U L. Zweifel** and Å. Hagström. **Cycling of Marine Dissolved Organic Matter: II. A model analysis.** *Aquatic Microbial Ecology.* 11:79-90.
- 1996** Fry, B., Hopkinson, C. S. J., Nolin, A., Norrman, B. and **Zweifel, U L.** **Long-term decomposition of DOC from experimental diatom blooms.** *Limnology*

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and Oceanography. 41: 1344-1347.

- 1995** Zweifel, U L., et al. **Dynamics of dissolved organic carbon in a coastal ecosystem.** Limnology and Oceanography. 40:299-305.
- 1995** Zweifel, U L. and Å. Hagström. **Total counts of marine bacteria include a large fraction of non-nucleoid containing bacteria (ghosts).** Applied Environmental Microbiology. 61:2180-2185.
- 1995** Norrman, B., U L. Zweifel, C. S. J. Hopkinson and B. Fry. **Production and utilization of dissolved organic carbon during an experimental diatom bloom.** Limnology and Oceanography. 40:898-907.
- 1993** Zweifel, U L., et al. **Consumption of dissolved organic carbon by marine bacteria and demand for inorganic nutrients.** Marine Ecology Progress Series. 101:23-32

Scientific and Series editor, UNEP Global International Waters Assessment

Published by University of Kalmar on behalf of United Nations Environment Programme:

2005:

- Aral Sea, GIWA Regional assessment 24.
Russian Arctic, GIWA Regional assessment 1a.
Yellow Sea, GIWA Regional assessment 34.
East China Sea, GIWA Regional assessment 36.
Canary Current, GIWA Regional assessment 41.
Benguela Current, GIWA Regional assessment 44.
South China Sea, GIWA Regional assessment 54.
Sulu-Celebes (Sulawesi) Sea, GIWA Regional assessment 56.
Indonesian Seas, GIWA Regional assessment 57.
Humboldt Current, GIWA Regional assessment 64.

2004:

- Lake Chad, GIWA Regional assessment 43.
Patagonian Shelf, GIWA Regional assessment 38.
Brazil Current, GIWA Regional assessment 39.
Barents Sea, GIWA Regional assessment 11.
Caribbean Sea/Small Islands, GIWA Regional assessment 3a.
Caribbean Islands – Region 4.
Arctic Greenland, East Greenland Shelf, West Greenland Shelf , GIWA Regional assessment 1b, 15, 16.
Faroe Plateau, GIWA Regional assessment 13
Pacific Islands, GIWA Regional assessment 62.
Gulf of California/Colorado River Basin, GIWA Regional assessment 27.

2003:

- Caspian Sea, GIWA Regional assessment 23.
Amazon Basin, GIWA Regional assessment 40b.
Indian Ocean Islands, GIWA Regional assessment 45b.
East African Rift Valley Lakes, GIWA Regional assessment 47.
Guinea Current, GIWA Regional assessment 42.