

Curriculum vitae: Matthias Obst

Personal data

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Current occupation

Title & position Associate professor (docent), permanent employed at University of Gothenburg, with responsibility for individual research projects in marine ecology and conservation (50%) as well as coordination of biodiversity infrastructure projects (50%).

Education

2013 Appointment as a docent (Associate professor)
2004 PhD Biology, University of Aarhus, Denmark
2000 MSc Biology, University of Jena, Germany

Work history and projects

2011-2020 Consortium chair and local coordinator for VR-financed Swedish LifeWatch Infrastructure program (www.svenskalifewatch.se) with an overall budget of >7.1 M€.

2017-2019 DeepDive program manager (<https://neic.no/deepdive/>) coordinating biodiversity e-infrastructures among Nordic and Baltic countries.

2017-2021 Partner in Horizon 2020 financed network program for European marine biological stations ASSEMBLE+ (<http://assembleplus.eu/>)

2015-2018 Partner in Horizon 2020 financed program for Environmental Research Infrastructures (www.envriplus.eu).

2011-2014 Scientific project leader of FP7 financed Biodiversity Virtual e-Laboratory (www.biovel.eu), with a budget of 5 M€. Here my responsibility was to lead a team of >20 scientists and engineers and coordinate webservice development for distributed analysis of biodiversity data, including museum data.

Work package leader in FP7 financed project Marine Genomics 4 users (www.mg4u.eu), with responsibility for knowledge transfer from the marine genomics domain into the policy sector. The program had an overall budget of 1M€.

2009-2011 Researcher and Work package leader in FP7-financed ESFRI (European Science Forum for Research Infrastructure) preparatory program LifeWatch.eu, with responsibility for scientific, technical, and legal aspects of

distributed data on biodiversity. Employed at GU.

2005-2008 Postdoctoral fellow of the Royal Swedish Academy, Kristineberg Marine Research Station, Sweden. Research on zoological systematics.

Areas of expertise & list of qualifications

Scientific track record Overall scientific citations = 2964, h-index = 19. Co/-author of 45 publications in 4 languages, including highly cited publications in *Nature*, *Nature Communications*, *BMC Ecology*, *GigaScience*, and *Proceedings of the Royal Society*. A publication overview is available at <https://scholar.google.se/citations?user=WbbsgDjsAAAAJ&hl=en>.

Subject expertise Biodiversity research, Systematic zoology, Ecology and conservation biology, e-science, species distribution modelling, biogeography and phylogeography, molecular taxonomy, metabarcoding, phylogenomics, zoomorphology

Supervision 12 post-doctoral fellows, graduate and undergraduate students since 2004: BSc thesis Bernard Stewart, University of Gothenburg, SE (2018), MSc thesis *Aku Kavaja & Rikard Karlsson*, University of Gothenburg, SE (2016-2017), BSc thesis *Linn Nilsson*, University of Gothenburg, SE (2015), Post-doc *Sonja Leidenberger*, University of Gothenburg (2013-2014), Post-doc *Sarah Bourlat*, University of Gothenburg (2012), PhD thesis *Judith Fuchs*, University of Gothenburg (2011), Post-doc *Lisa Matamoros*, University of Gothenburg (2011), MSc thesis *Kasper K Nielsen & Bo Rasmussen*, Aarhus University, DK (2008), MSc thesis *Judith Fuchs*, Aarhus University, DK (2004), MSc thesis *Khy An*, Aarhus University, DK (2004)

Field work & expeditions Bioskag II expedition (2009) Inventory of the marine bottom fauna of the Norwegian Skagerrak; SANMARIN expedition (2006-09) Inventory of the marine bottom fauna of the Swedish west coast; Galathea3 expedition (2007) Conservation of Asian horseshoe crabs; Thailand (2006) Conservation of Asian horseshoe crabs

Field and laboratory methods Diving, epi-/benthic dredging and trawling, plankton sampling, light- and fluorescence microscopy, confocal laser scanning microscopy, next generation sequencing, transmission- and scanning electron microscopy

ICT expertise GIS, R, SQL, web services and workflow engines, content management systems

Language Swedish (fluent), Danish (fluent), German (native), English (fluent)

Teaching and pedagogics Sixteen years of courses, lectures, and seminars for undergraduate and graduate students in 4 languages at 5 Universities. Completed high school pedagogical courses HPE101 and HPE102.

Business Consultancy company founded in 2013 (<http://seanalytics.se/>)

Professional duties

Chair Chair of the Swedish LifeWatch consortium (<http://svenskalifewatch.se>)

Member in Nordic-Baltic Collaboration on e-Infrastructures for Biodiversity

management and steering committees	Informatics (https://wiki.neic.no/wiki/Biodiversity) European Marine Biodiversity Observatory System (http://embos.eu/) Genomics observatories network (http://genomicobservatories.org/)
Task leader in global initiatives	Group on Earth Observation GEO System of Systems (GEOSS) - task leader for Global Ecosystem Monitoring
Research Council advisor	Swedish Research Council (VR), British Research Council (NERC)
Editorial work	Associate Editor in Frontiers in Marine Ecosystem Ecology (www.frontiersin.org)
Referee work	Journal Reviewer for >40 scientific journals (incl. Molecular Ecology, PeerJ, Marine Biology Research, Journal of the Marine Biological Association of the UK, BMC Evolutionary Biology).

10 selected publications

Full record available at <https://scholar.google.se/citations?user=WbsgDjsAAAAJ&hl=en>

Peer-reviewed original articles

1. Kissling WD, et al (2017) Building essential biodiversity variables (EBVs) of species distribution and abundance at a global scale. *Biological Reviews*. 93 (1), 600-625. <http://onlinelibrary.wiley.com/doi/10.1111/brv.12359/full>
2. **Obst M**, Vicario S, Berggren M, Karlsson A, Lundin K, Haines R, Williams A, Goble C, Mathew C, Güntsch A (2017) Marine long-term biodiversity assessment indicates loss of rare species in the Skagerrak and Kattegat region. *Marine Biodiversity* 1-12. doi: 10.1007/s12526-017-0749-5
3. Hardisty A, et al (2016) BioVeL: a virtual laboratory for data analysis and modelling in biodiversity science and ecology. *BMC Ecology* 16(1), 49, DOI: 10.1186/s12898-016-0103-y.
4. Leidenberger S, **Obst M**, Kulawik R, Stelzer K, Heyer K, Hardisty A, Bourlat SJ (2015) Evaluating the potential of ecological niche modelling as a component in non-indigenous species risk assessments. *Marine Pollution Bulletin*. 97: 470-487.
5. Mathew C, Guentsch A, **Obst M**, Vicario S, Haines R, Williams AR, de Jong Y, Goble C (2014) A semi-automated workflow for biodiversity data retrieval, cleaning, and quality control *Biodiversity Data Journal* 2: e4221.
6. Gärdenfors U, Jönsson M, **Obst M**, Wremp AM, Kindvall O, Nilsson J (2014) Swedish LifeWatch – a biodiversity infrastructure integrating and reusing data from citizen science, monitoring and research. *Human Computation* 1(2): 147-161.
7. Davies N, Field D, Amaral-Zettler L, Clark M, Deck J, Drummond A, Faith D, Geller J, Gilbert J, Gloeckner FO, Hirsch P, Leong JA, Meyer C, **Obst M**, et al. (2014) The Founding Charter of the Genomic Observatories Network. *Giga Science* 3: 2.

8. Bourlat SJ, Borja A, Gilbert J, Taylor MI, Davies N, Weisberg SB, Griffith JF, Lettieri T, Field D, Benzie J, Glöckner FO, Rodríguez-Ezpeleta N, Faith DP, Bean TP, **Obst M** (2013) Genomics in marine monitoring: new opportunities for assessing marine health status. *Marine Pollution Bulletin* 74(1): 19–31.
9. Bourlat SJ, Nakano H, Åkerman M, Telford MJ, Thorndyke MC, **Obst M** (2008) Feeding ecology of *Xenoturbella bocki* (phylum Xenoturbellida) revealed by genetic barcoding. *Molecular Ecology Resources* 8: 18-22.
10. Dunn CW, Hejnol A, Matus DQ, Pang K, Browne WE, Smith SA, Seaver E, Rouse GW, **Obst M**, et al (2008) Broad phylogenomic sampling improves resolution of the Animal Tree of Life. *Nature* 452 (7188): 745-750.