CURRICULUM VITAE

Wörheide, Prof. Dr. Gert

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- **CURRENT POSITIONS**

2008 – cont. Full tenured Professor (Chair) of Palaeontology and Geobiology, Ludwig-Maximilians-Universität München (Germany)

2008 – cont. Director, Bavarian State Collections of Palaeontology and Geology of the Bavarian Natural History Collections (SNSB) and Paleontological Museum, München (Germany) (joint appointment)

- **PREVIOUS POSITIONS**

2002 – 2008 Juniorprofessor for Molecular Geobiology at the Department for Geobiology, Geoscience Centre, University of Göttingen (Germany).

- **EDUCATION**

1998 *Doctor rerum naturalium* (Dr. rer. nat.), Faculty of Geosciences, Georg-August-Universität Göttingen (Germany). *Summa cum laude* (with distinction). Topic: Micromorphology, Ultrastructure, Biomineralization, Isotope Record, and Systematics of a Coralline Sponge.

1994 Diplom (MSc) in Geology/Palaeontology, Freie Universität Berlin (Germany)

- **FELLOWSHIPS AND AWARDS**

2024 Election as Ordinary Member into the *Leibniz-Sozietät der Wissenschaften zu Berlin (Leibniz-Society of Sciences, Berlin)*

2019 Election as Ordinary Member into the *Academia Europea* (Section Evolutionary Biology)

2019 – cont. Chair of the European Chapter of the International Society for Reef Studies

2006 BioMed Central Research award in Biology for the publication "A rapidly evolving secretome builds and patterns a sea shell".

2002 – cont. Honorary Research Fellow, Queensland Museum, Brisbane (Australia)

2000 – 2002 Australian Biological Resources Study (ABRS) Postdoctoral Research Fellow at the Queensland Centre of Biodiversity, Queensland Museum, Brisbane and at the Molecular Zoology Lab, Dept. of Zoology and Entomology, The University of Queensland, Brisbane (Australia).

1998 – 2000 Postdoctoral fellow of the DAAD (German Academic Exchange Service). Marine Biology Laboratory, Queensland Museum, Brisbane (Australia).

1998 '*Inge und Werner Grüter-Preis für Wissenschaftspublizistik 1998*' ('Inge und Werner Grüter-prize for Scientific Journalism')

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

2002 – 2025

Habilitations	PostDocs	Phd Theses	Masters theses	Bachelor theses
4	10	13	27	11

- **TEACHING ACTIVITIES**

2002 – cont. regular courses (7 hrs/week per semester), including, for example: Earth History (BSc), Marine Biology (MSc), Biomineralization (MSc), Molecular Paleobiology (BSc), Coral Reef Geobiology (Annual field course to tropical coral reefs, MSc, BSc).

● ORGANIZATION OF SCIENTIFIC MEETINGS

2016	17th Annual Meeting of Society for Biological Systematics (GfBS), Munich, Chair
2015	Intl. workshop of the "Global Invertebrate Genomics Alliance" (GIGA), Munich, Chair
2011	Intl. conference "Deep Metazoan Phylogeny - new data, new challenges", Munich, Chair
2010	80th Annual Meeting of the German Palaeontological Society, Munich, Chair

● INSTITUTIONAL RESPONSIBILITIES

2024 – 2025	Senator (Member of the Senate), LMU Munich
2022 – 2026	Deputy General Director, Bavarian Natural History Collections (SNSB)
2019 – 2021	Vice-Dean of the Faculty of Geosciences, LMU Munich
2017 – 2019	Dean of the Faculty of Geosciences, LMU Munich
2014 – cont.	Member of the central committee for the distribution of student fees (Mitglied der Zentralen Studienzuschusskommission der Ludwig-Maximilians-Universität München)
2014 – 2017	Member of the Academic Advisory Board for the China-Strategy of the Ludwig-Maximilians-Universität München ("China Forum")
2014 – 2018	Deputy Director, Dept of Earth and Environmental Sciences, LMU Munich
2013	Initiator and leader of the development of the international Master's Degree Program "Geobiology and Paleobiology" (120 ECTS, in English). EVALAG accredited in 2014.
2013 – 2017	Vice-Dean of the Faculty of Geosciences, LMU Munich
2011 – 2013	Dean of the Faculty of Geosciences, LMU Munich
2009 – cont.	Speaker of the Executive Board, GeoBio-Center^{LMU}, LMU Munich

● REVIEWING ACTIVITIES

Scientific journals: Proceedings of the National Academy of Sciences of the USA; Current Biology; Molecular Ecology; Molecular Biology and Evolution; Proceedings of the Royal Society London, Series B; Molecular Phylogenetics and Evolution; Journal of Molecular Evolution; Zoological Journal of the Linnean Society; Geology; Marine Biology; Marine Biology Research; Coral Reefs; Sarsia; Zootaxa; Limnology and Oceanography: Methods; Journal of Zoology; Canadian Journal of Zoology; Journal of the Marine Biological Association of the UK; PLoS Journals; BMC Journals; Geobiology; Biology Letters.

Editorial responsibilities:

2025	Guest Editor Special Issue "European Coral Reef Symposium" *Coral Reefs*
2020	Guest Editor Special Issue "Molecular Biodiversity of Marine Invertebrates", *Diversity*
2013 – 2017	Editorial Board Member, *Palaeoworld*
2009 – cont.	Section editor "Phylogeny & Phylogeography" *BMC Evolutionary Biology*
2008 – cont.	Editor-in-Chief, *Zitteliana*
2005 – 2013	Subject editor Porifera, *Zootaxa*

Funding agencies: Deutsche Forschungsgemeinschaft (DFG); Deutscher Akademischer Austauschdienst (DAAD); Humboldt-Foundation; Genoscope (France); Australian Biological Resources Study (ABRS); National Geographic; FNRS Belgium; NWO Netherlands;
European Union: FP6, FP7, Horizon2020. Expert reviewer for: Collaborative Project (large scale integrating project): 2009; Marie-Curie actions (IOF, IIF, IEF): 2009, 2010, 2011, 2012, 2013, 2015, 2016, 2017; ERA-Chairs: 2013, 2014, 2017; TWINNING: 2015; WIDESPREAD: 2015; Innovative Training Networks (ITN)/Doctoral Networks (DN): 2014, 2015; 2021, 2022, 2023 (Vice Chair), 2024 (Vice Chair); H2020-SwafS-2020-1: 2020 (Vice-Chair).
European Research Council (ERC): Starting Grant (2013, 2015, 2017, 2025); Advanced Grant (2012, 2021, 2022, 2023)

● MEMBERSHIPS OF SCIENTIFIC SOCIETIES

International Coral Reef Society; Society for Biological Systematics; German Zoological Society; German Palaeontological Society

- **MAJOR CONTRIBUTIONS TO THE FIELD**

My research has been at the forefront of exploring the evolution of biomineralization and using DNA-based technologies including phylogenomics, genomics, and transcriptomics to address cutting-edge research questions in the geobiology and paleobiology of marine invertebrates, particularly sponges, corals, and echinoderms. **My approach has led to significant and world-leading contributions to:**

- **unravel the molecular systematics and phylogeny of sponges;**
- **investigate the relationships of the non-bilaterian animals using phylogenomics;**
- **reconstruct the evolution of selected gene families by comparative genomics, including those involved in calcification** in coralline and calcareous sponges, and scleractinian- and octocorals.

Specifically, my research group was **one of the first to adopt genomic approaches for investigating the evolution of key proteins involved in biomineralization** introducing the now widely used concept of the "skeletogenic toolkit" (Jackson et al. 2007, *Science*) and **resolving deep nodes in the animal tree of life** by phylogenomics (Philippe et al. 2009, *Current Biology*). My research group has made **highly-cited contributions to deep metazoan phylogenomics** with more than 2000 citations to date, **and** our contributions to the field of **biomineralization** have accumulated in total more than 1000 citations.

TOTAL CITATION ANALYSIS (ORCID: 0000-0002-6380-7421):

Source	*Date accessed*	*Total Publications*	*Total Citations*	*H-Index*
Google Scholar	13.09.2025	356	17,700	72

10 MOST IMPORTANT CAREER PUBLICATIONS

*****corresponding author, [#]PostDoc/PhD/MSc student of group

1. **Wörheide G***, Kaltenbacher E[#], Cowan Z-L[#], Haszprunar G, 2022. A new species of crown-of-thorns sea star, *Acanthaster benziei* sp. nov. (Valvatida: Acanthasteridae), from the Red Sea. *Zootaxa* 5209 (3), 379–393.
2. Eitel M[#], Francis WR[#], Varoqueaux F, Daraspe J, Osigus H-J, Krebs S, Vargas S[#], Blum H, Williams GA, Schierwater B, **Wörheide G*** (2018) Comparative genomics and the nature of placozoan species. *PLoS Biology* 16 (7): e2005359.
3. Mills DB, Francis WR[#], Vargas S[#], Larsen M, Elemans CPH, Canfield DE, **Wörheide G*** (2018) The last common ancestor of animals lacked the HIF pathway and respired in low-oxygen environments. *eLife* 7, e31176.
4. Feuda R, Dohrmann M[#], Pett W, Philippe H, Rota-Stabelli O, Lartillot N, **Wörheide G***, Pisani D* (2017) Improved modeling of compositional heterogeneity supports sponges as sister to all other animals. *Current Biology* 27, 3864–3870.
5. Simion P, Philippe H, Baurain D, Jager M, Richter DJ, Di Franco A, Roure B, Satoh N, Quéinnec É, Ereskovsky A, Lapébie P, Corre E, Delsuc F, King N, **Wörheide** G, Manuel M (2017) A large and consistent phylogenomic dataset supports sponges as the sister group to all other animals. *Current Biology* 27, 958–967.
6. Pisani D, Pett W, Dohrmann M[#], Feuda R, Rota-Stabelli O, Philippe H, Lartillot N, **Wörheide G*** (2015) Genomic data do not support comb jellies as the sister group to all other animals. *Proceedings of the National Academy of Science of the USA* 112 (50): 15402–7.
7. Steinmetz PRH., Kraus JEM, Larroux C[#], Hammel JU, Amon-Hassenzahl A, Houliston E, **Wörheide G**, Nickel M, Degnan BM, Technau U. 2012. Independent evolution of striated muscles in cnidarians and bilaterians. *Nature* 487, 231–234.
8. Philippe H, Brinkmann H, Lavrov DV, Littlewood DTJ, Manuel M, **Wörheide G**, Baurain D. 2011. Resolving difficult phylogenetic questions: why more sequences are not enough. *PLoS Biology*, 9, e1000602.
9. Philippe H, Derelle R, Lopez P, Pick K[#], Borchiellini C, Boury-Esnault N, Vacelet J, Renard E, Houliston E, Quéinnec E, Da Silva C, Wincker P, Le Guyader H, Leys S, Jackson DJ, Schreiber F[#],

Erpenbeck D[#], Morgenstern B, **Wörheide G***, Manuel M. 2009. Phylogenomics revives traditional views on deep animal relationships. *Current Biology* 19, 706–712.

10. Jackson DJ[#], Macis L[#], Reitner J, Degnan B M, **Wörheide G***. 2007. Sponge paleogenomics reveals an ancient role for carbonic anhydrase in skeletogenesis. *Science*, 316(5833):1893-1895.

Selected INVITED KEYNOTES at international conferences:

2022 International Workshop "The Origin of Metazoa". Roscoff, France. Keynote on phylogenomics (attendance not possible due to COVID infection).
2017 International Workshop "Origin of Metazoa". Paris, France. Keynote on phylogenomics.
2017 10th World Sponge Conference. Galway, Ireland. Keynote on phylogenomics.
2017 International Workshop "New genome editing technologies: applications and technical considerations". Paris, France. Keynote on phylogenomics.
2015 International Workshop "The Origin of Metazoa". Hyeres-les-Palmiers, France. Keynote on phylogenomics.
2013 The Leichhardt Symposium on Biodiversity and Conservation, The University of Queensland. Brisbane, Australia. Keynote on marine biodiversity.
2013 Global Invertebrate Genomics Alliance (GIGA) Inaugural Workshop, NOVA Southeastern University. Ft. Lauderdale, USA. Keynote on phylogenomics.
2010 8th International Sponge Conference. Girona, Spain. Keynote on phylogenomics.

- **OUTREACH TO GENERAL PUBLIC**

The dissemination and communication of research results to the public is an important aspect of my work. We regularly publish press releases to feature recent publications through EurekAlert and IDW-online (seven in the past five years). Since 2017 I have been invited to several presentations about coral reefs in high-schools through www.forschungsboerse.de (see my profile https://bit.ly/2Noxes7), had numerous appearances on TV (e.g., https://bit.ly/2Vc8YgT), radio, youtube (https://youtu.be/ACSFdo5B--g), and in the German press (e.g., https://bit.ly/3dsK1El). See also https://profiles.impactstory.org/u/0000-0002-6380-7421

- **MAJOR CONTRIBUTIONS TO PROMOTING EARLY CAREER RESEARCHERS**

The training of excellent young researchers has been at the heart of my work since I took up my position in Munich in 2008. In 2012, **I initiated and then led the** successful development of the **international research-oriented 120 ECTS Masters Program "Geobiology and Paleobiology"** (MGAP) that officially started in the Winter Semester 2013/14. MGAP was subsequently given the quality seal of approval by the accreditation agency EVALAG in 2014. This successful Masters program has produced highly skilled graduates, most of which have moved on to prestigious PhD positions in different countries, for example England, Sweden, Netherland, and Australia. For example, one of my last Masters students, Elsa Girard, is now a PhD student in the ITN 4D-REEF "Past, present, and future of coral reefs in the Coral Triangle".
In 2016, **I initiated and coordinated** the Horizon 2020 **European Training Network "Comparative Genomics of Non-Model Invertebrates" (IGNITE**, www.itn-ignite.eu, 48 months duration, 2018-2022, total funding 3.8 M€, 15 PhD students across Europe).

Many of my mentees have moved on to renowned institutions around the world:

- former Postdoc Dr. Daniel Jackson is now a Professor at the University of Göttingen.
- former PhD student Dr. Christine Böhmer is now a Professor at the University of Kiel.
- former MSc student Dr. Laura Epp is now a Professor at the University of Konstanz.
- former MSc student Dr. Bastian Bentlage is now a Professor at the University of Guam.
- former Postdoc Dr. Azizur Rahman to the University of Toronto.