

EDUCATION

- 2013 Promotion (PhD) magna cum laude in Biology (Paleontology) at Humboldt-Universität, Berlin, Germany.
- 2007 Master (MSc) in Systematic, Evolution and Paleontology at Université Pierre et Marie Curie (UPMC) coaccredited with Museum National d'Histoire Naturelle and École Normale Supérieure, Paris, France.
- 2004 Licence (BSc) in Earth and Space Sciences at Université Paul Sabatier, Toulouse, France.
- 2003 DEUG in Earth and Universe Sciences at Université Paul Sabatier, Toulouse, France.
- 2001 Baccalauréat in Science (Mathematics) at Lycée Pré de Cordy, Sarlat-la-Canéda, France.

RESEARCH EXPERIENCE

- 2018–22 PostDoc research project (DAAD MOPGA-GRI) at the Museum für Naturkunde (MfN) with G. Asatryan and D. B. Lazarus on 'Polar Oceans, Phytoplankton and Oceanic Carbon Sequestration in a Warm, High pCO_2 World'.
- 2015–17 PostDoc research project (DFG grant RE3470/3-1) at MfN on 'Diatoms, Radiolarians and the Cenozoic Silicon and Carbon cycles'.
- 2014–15 PostDoc research project at MfN with D. B. Lazarus and H. Pälike on 'Earthtime-EU: Integrated deep-sea microfossil chronostratigraphic database, website and analytic tools'.
- 2008–12 PhD research project (DFG grant LA1191/8-1,2) at MfN with D. B. Lazarus and B. Mohr on a 'Synthesis on Antarctic Neogene radiolarians: taxonomy, macroevolution and biostratigraphy'.
- 2007 MSc research project at UPMC with T. Danelian and S. Saint-Martin on 'Siliceous plankton paleoecology in the tropical Atlantic in relation with Middle Eocene climatic changes'.
- 2006 MSc research project at UPMC with T. Danelian on 'Radiolarian diversity and taphonomy during the critical warming interval of the Paleocene-Eocene boundary'.

FIELDWORK

- 2019 IODP Expedition 379 'Amundsen Sea West Antarctic ice-sheet history': Radiolarian specialist.

PUBLICATIONS

Peer-reviewed articles

- 2019 Piazza V., Duarte L., Renaudie J., Aberhan A. Reductions in body size of benthic macro-invertebrates as a precursor of the Early Toarcian (Early Jurassic) extinction event in the Lusitanian Basin, Portugal. *Paleobiology*.
- 2018 Renaudie J., Drews E.-L., Böhne S. The Paleocene record of marine diatoms in deep-sea sediments. *Fossil Record*, 21(2), 183–205.
Lazarus D.B., Renaudie J., Lenz D., Diver P., Klump J. Raritas: a program for counting high diversity categorical data with highly unequal abundances. *PeerJ*, 6, e5453.
- 2016 Renaudie J. Quantifying the Cenozoic marine diatom deposition history: links to the C and Si cycles. *Biogeosciences*, 13(21), 6003-6014.
Wiese R., Renaudie J., Lazarus, D.B. Testing the accuracy of genus-level data to predict species diversity in Cenozoic marine diatoms. *Geology*, 44(12), 1051-1054.
Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean - Part IV. *Journal of Micropalaeontology*, 35(1), 26-53.
- 2015 Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean - Part III. *Journal of Micropalaeontology*, 34(2), 181-209.
- 2014 Lazarus D.B., Barron J., Renaudie J., Diver P., Türke A. Cenozoic diatom diversity and correlation to climate change. *PLoS ONE*, 9(1), e84857.
- 2013 Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean - Part II. *Journal of Micropalaeontology*, 32(1), 59-86.
Renaudie J., Lazarus D.B. On the accuracy of paleodiversity reconstructions: a case study in antarctic radiolarians. *Paleobiology*, 39(3), 491-509.
- 2012 Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean. *Journal of Micropalaeontology*, 31(1), 29-52.

- 2010 Renaudie J., Danelian T., Saint-Martin S., Le Callonec L., Tribovillard N. Siliceous phytoplankton response to a Middle Eocene warming event recorded in the tropical Atlantic (Demerara Rise, ODP Site 1260A). *Palaeogeography, Palaeoclimatology, Palaeoecology*, 286, 121–134.

Submitted

- 2018 Renaudie J., Gray R., Lazarus D.B. Accuracy of a neural net classification of closely-related species of microfossils from a sparse dataset of unedited images. *Submitted to PeerJ*.

SEMINAR TALKS

Invited talks

- 2016 University of Leeds, UK : Diatoms, climate and the marine Silicon cycle. November, 10th.

In-house talks

- 2018 Evolutionsbiologisches Seminar (MfN): The Cenozoic evolution of the diatom-climate system. September, 27th.
- 2017 Wissenschaftstag 'Taxonomie' (MfN): Micropaleontology, between taxonomic backbone databases and alpha taxonomy. May, 31st.

CONGRESS PARTICIPATIONS

Talks

- 2018 GEOBONN 2018 'Living Earth' in Bonn, Germany: Jansen M., Buchwitz M., Renaudie J., Voigt S., Reconstruction of an ancestral amniote trackmaker based on trackway data, track-trackmaker correlation and phylogeny.
- 2017 InterRad 15th meeting in Niigata, Japan: Renaudie J., Fontorbe G., Lazarus D., Salzmann S., Frings P., Conley D., Testing the vital effect on silicon isotope measurements in Late Eocene Pacific radiolarians.
- 2016 Lyell Meeting of the Geological Society in London, UK : Lazarus D., Renaudie J., Diver P., The NSB (Neptune) Database : current status and future development.
- 2015 InterRad 14th meeting in Antalya, Turkey: Renaudie J., Lazarus D.B., Diatoms, radiolarians and the Cenozoic Si and C cycles ; Lazarus D.B., Renaudie J., Reconstructing radiolarian diversity: what we don't know; and a new analysis of the Cenozoic.
- 2014 EGU general meeting in Vienna, Austria: Renaudie J., Lazarus D.B., A quantitative review of Cenozoic diatom deposition history.
- 2013 TMS Silicofossil Group meeting in Cambridge, UK: Renaudie J., Lazarus D.B., Cenozoic history of marine diatom deposition: a quantitative review.
- Deutscher Museumsbund Fachgruppe Dokumentation Herbsttagung in Berlin-Dahlem, Germany: Renaudie J. (on behalf of Lazarus D.B.), Taxonomic backbone databases for fossil and living marine microplankton.
- 2012 InterRad 13th meeting in Cadiz, Spain: Renaudie J., Lazarus D.B., On the accuracy of paleodiversity reconstructions: a case study using Antarctic Neogene radiolarians.
- Jubiläumstagung der Paläontologische Gesellschaft in Berlin, Germany: Renaudie J., Lazarus D.B., Macroevolutionary patterns in Antarctic Neogene radiolarians.
- TMS annual meeting in Nottingham, UK: Renaudie J., Lazarus D.B., Toward an high-resolution stratigraphy for Antarctic Neogene radiolarians.
- 2011 TMS Silicofossil Group meeting in Lille, France: Renaudie J., Lazarus D.B., Macro-evolutionary patterns in Antarctic Neogene radiolarians.
- 2007 Congrès de l'Association Française de Paléontologie in Dignes-les-Bains, France: Renaudie J., Danelian T., Saint-Martin S., Eocene diatoms in the tropical Atlantic (ODP Leg 207) and climate changes.

Posters (selection, out of 27)

- 2018 TMS Annual meeting in Leeds, UK: Asatryan G., Lazarus D., Renaudie J., Paleogene polar phytoplankton and oceanic carbon sequestration; Renaudie J., Drews E.-L., Böhne S., The Paleocene fossil record of marine planktonic diatoms in deep-sea sediments; Renaudie J., Gray, R., Lazarus D., Testing the accuracy of the MobileNet convolutional neural network to identify closely-related radiolarian species based on a sparse dataset.

- 25th International Diatom Symposium in Berlin, Germany: Renaudie J., Lazarus D.,
Macroevolutionary patterns in Cenozoic marine diatoms from deep-sea sediments, and their
relationship with climate and marine geochemical cycles.
- 2017 Kolloquium der DFG-Schwerpunkte ICDP/IODP in Braunschweig, Germany: Renaudie J.,
Fontorbe G., Drews E.-F., Böhne S., Lazarus D., Constraining the history of the Cenozoic
marine silicon cycle with siliceous microfossils.
- Evolution 2017 in Portland, Oregon: Renaudie J., Lazarus D., Diver P., The NSB (Neptune)
marine microfossil occurrences database.
- 2016 International Conference on Paleoceanography in Utrecht, Netherlands: Renaudie J.,
Quantifying the Cenozoic marine diatom record; Renaudie J., Lazarus D., Diver P., Expanding
the NSB database for paleoceanographical research.
- 2015 GSA annual meeting in Baltimore, USA: Renaudie J., Diver P., Lazarus D., NSB: a new,
expanded and improved database of marine planktonic microfossil data.
- 2014 EGU general meeting in Vienna, Austria: Lazarus D.B., Renaudie J., Diversity history of
Cenozoic marine siliceous plankton.
- 2012 InterRad 13th meeting in Cadiz, Spain: Renaudie J., Lazarus D.B., Advances in Antarctic
Neogene radiolarian high-resolution stratigraphy; Lazarus D.B., Renaudie J., Taxonomic
documentation of Southern Ocean Neogene radiolarians.
- 2010 Kolloquium der DFG-Schwerpunkte ICDP/IODP in Frankfurt, Germany: Renaudie J., Lazarus
D.B., Weinkauff M., Marine micropaleontology, round two: whole faunal surveys and their use
in biostratigraphy and macroevolutionary research.
- Third International Paleontological Congress in London, UK: Renaudie J., Lazarus D.B.,
Macroevolutionary patterns in Antarctic Neogene radiolarians.
- 2009 InterRad 12th meeting in Nanjing, China: Lazarus D.B., Renaudie J., Synthesis on Antarctic
Neogene Radiolaria: preliminary results.
- 2006 Paleontological Association 50th Annual Meeting in Sheffield, UK: Danelian T., Renaudie J.,
Blanc-Valleron M.-M., The radiolarian record of the equatorial Atlantic during the
Paleocene/Eocene Thermal Maximum event.

SCIENTIFIC PROGRAMMING

Softwares

- 2017 NSB_ADP_wx – Age-Depth plot maker in Python.
- 2016 Raritas – Micropaleontological counting software in Python.

Packages

- 2014 NSBcompanion – R package to retrieve data from NSB database.
- 2013 dendextend – R package for dendrogram visualizations (as contributor only).
- 2012 CONOP9companion – R package to integrate software CONOP9 in a statistical workflow.

Databases

- since 2013 Maintainer and developer of the NSB database, successor of the legacy Neptune database.

SERVICES TO PROFESSION

- 2018 Remote reviewer for an ERC Advanced Grant proposal.
- 2015–18 Organizer of the MfN ‘Code Clinic’ Scientific Programming Club (on-the-job training for ECR).
- since 2013 Reviews for *Proceedings of the Royal Society B*; *Paleoceanography*; *Paleobiology*;
Palaeogeography, *Palaeoclimatology*, *Palaeoecology*; *Journal of Plankton Research*; *Revue de*
Micropaléontologie; *Acta Paleontologica Romaniaae*.

WORKSHOP PARTICIPATIONS

- 2018 BioExtremes hackathon at MfN.
- 2017 ‘Access to Geosciences: sharing and publishing data related to paleontological, mineralogical,
and petrological objects using a common data standard’ workshop at MfN.
- 2010 ‘Paleobiology Database Intensive Workshop in Analytical Paleobiology’ at Macquarie University,
Sydney, Australia.

PUBLIC OUTREACH

- 2014 'Tiefenzeit Geschichten der Zukunft: von Plankton, Muscheln und Klimawandel' booth at the MfN during the [Lange Nacht der Wissenschaften](#).
- 2011 Guided tour of the MfN Micropaleontology Collection during the [Lange Nacht der Museen](#).

GRANTS & AWARDS

Grants

- 2018 DAAD 'Make Our Planet Great Again – German Research Initiative' grant (PI: [Gayane Asatryan](#)).
- 2015 DFG Grant RE3470/3–1: 'Eigene Stelle' grant in the Priority Program 527 (IODP).

Awards

- 2012 TMS Student Prize for best Poster at InterRad 13th meeting in Cadiz, Spain.

WORK EXPERIENCE

- 09/2018–06/2022 Postdoctoral researcher (DAAD MOPGA-GRI) at the MfN.
- 11/2015–05/2017 Postdoctoral researcher (DFG) at the MfN.
- 03/2014–06/2015 Postdoctoral researcher (Earthtime-EU) at the MfN.
- 05–07/2013 Programmer at the MfN for the Neptune Database web interface.
- 11/2008–09/2012 Scientific assistant at the MfN.
- 10/2007–07/2008 Library assistant at the Bibliothèque Centrale of Université Paris VII.

PROFESSIONAL MEMBERSHIP

- European Geosciences Union (EGU)
- International Association of Radiolarian Scientists (InterRad)
- The Micropalaeontological Society (TMS)

OTHER

- Fluent in French (native) and English, intermediate level in Latin and German.
- Advanced programming skills in R, python (including Django and wxPython), postgresSQL (and other SQL derivatives) and \LaTeX . Familiar with Unix shell and Apache Webserver.