Johan RENAUDIE
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born in Sarlat-la-Canéda (France), July the 26th, 1983
ORCID: 0000-0002-9107-1984

EDUCATION

2013 Promotion (PhD) 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 grant 57429681) at the Museum für Naturkunde (MfN) with G. Asatryan and D.B. Lazarus on 'Polar Paleogene Plankton and Productivity'.

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

2020 Renaudie J., Lazarus D.B., Diver P. NSB (Neptune Sandbox Berlin): An expanded and improved database of marine planktonic microfossil data and deep-sea stratigraphy.. *Palaeontologia Electronica*, 23(2):a11.

2019 Piazza V., Duarte L.V., Renaudie J., Aberhan M. Reductions in body size of benthic macroinvertebrates as a precursor of the Early Toarcian (Early Jurassic) extinction event in the Lusitanian Basin, Portugal. *Paleobiology*, 45(2), 296–316.

Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists. Expedition 379 Preliminary Report: Amundsen Sea West Antarctic Ice Sheet History. *International Ocean Discovery Program: Preliminary Reports*, 379:1–33.

Varela S., Sbrocco E.J., Tarroso P., Perez-Luque A.J., Renaudie J., Warnstädt N., Fandos G., Foster W.J., Tietje M. BioExtreme hackathon en el Museum für Naturkunde de Berlín, Alemania. *Ecosistemas*, 28(1):129.

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.

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. *PeerJ Preprints*.

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.

SCIENTIFIC PROGRAMMING

2017 NSB_ADP_wx – Age-Depth plot maker in Python (last update: version 0.7; 2019).
2016 Raritas – Micropaleontological counting software in Python (last update: version 0.7; 2018).
2014 NSBcompanion – R package to work with the NSB database (last update: version 2.1; 2019).
2013 CONOP9companion – R package to integrate software CONOP9 in a statistical workflow.
dendextend – R package for dendrogram visualizations (as contributor only).
since 2013 Maintainer and developer of the NSB database, successor of the legacy Neptune database.

GRANTS

2018 DAAD 'Make Our Planet Great Again–German Research Initiative' grant 57429681 (PI:Asatryan).
2015 DFG Grant RE3470/3–1: 'Eigene Stelle' grant in the Priority Program 527 (IODP).

CONFERENCE PARTICIPATIONS last 2 years only

2020 EGU2020 Sharing Geoscience Online: Renaudie J., Lazarus D., Trubovitz S., Özen V., Rodrigues de Faria G., Asatryan G., Noble P., Cenozoic plankton diversity dynamics and the impact of macroevolution on the marine carbon cycle; Rodrigues de Faria G., Lazarus D., Struck U., Asatryan G., Renaudie J., Özen V., Paleogene Polar Plankton and export productivity changes between the Eocene and Oligocene.
Ocean Sciences meeting in San Diego, USA: Trubovitz S., Lazarus D., Renaudie J., Noble P., Radiolarians exhibit a threshold response to climate change during the late Neogene.
2019 3rd International Congress on Stratigraphy in Milan, Italy: Renaudie J., Lazarus D., Diver P., NSB, a Big Data tool for chronostratigraphic syntheses of the deep-sea sediment record.
North American Paleontological Conference (NAPC) in Riverside, USA: Lazarus D., Renaudie J., Asatryan G. Diversity dynamics and climate change in Cenozoic marine siliceous plankton; Lazarus D., Renaudie J., Young J., Diver P., NSB and Mikrotax: Databases and software tools for fossil and living plankton research; Trubovitz S., Lazarus D., Renaudie J., Noble P., Tropical and polar plankton demonstrate contrasting sensitivities to climate change throughout the Late Neogene.
Biodiversity_Next in Leiden, Netherlands: Lazarus D., Renaudie J., Paleobiodiversity and Earth Science Environmental Data.
TMS Annual Meeting in Nottingham, UK: Young J.R., Lazarus D.B., Renaudie J., Bown P.R., Wade B.S., Huber B.T., Can we extract biostratigraphically useful data from large-scale occurrence-databases such as Neptune? Insights from development of the Mikrotax system.
AGU Fall Meeting 2019 in San Francisco, USA: Trubovitz S., Lazarus D.B., Renaudie J., Noble P.J., Neogene Radiolarian Climate Sensitivity and its Implications for Ocean Ecosystems and Geochemical Cycling; Wellner J., Gohl K., Klaus A. and the Expedition 379 Science Party[??], West Antarctic Ice Sheet and Ocean Dynamics in the Outer Amundsen Sea: Initial Results from IODP Expedition 379.
EGU general meeting in Vienna, Austria: Session 'SSP4.6: Plankton in modern and past ecosystems' (convener: Thibault N.; co-conveners: Bottini C., Luciani V., Renaudie J., Noble P.); Asatryan G., Lazarus D., Renaudie J., The preliminary studies of plankton in the framework of the project "Paleogene Polar Plankton and Paleoproductivity".

MEDIA COVERAGE of projects I'm involved with (selection)

2020 *IEEE Spectrum*: Ambitious data project aims to organize the world's geoscientific records.
2019 *BBC*: The 'time machines' unlocking Antarctica's past.
Science: Newly drilled sediment cores could reveal how fast the Antarctic ice sheet will melt.
2018 *DAAD Aktuell*: "Make Our Planet Great Again – German Research Initiative": Forschung für die Zukunft der Erde.