

Nussaibah B. Raja-Schoob

PH.D. CANDIDATE

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I am a researcher in paleontology working on understanding the impact of environmental change on marine ecosystems on geological time scales. My focus is on reef-building organisms and their response to warming ocean temperatures.

Education

Friedrich-Alexander Universität Erlangen-Nürnberg

Erlangen, Germany

PH.D. IN PALEONTOLOGY

Oct. 2019 - present

- Expected graduation: September 2022
- Project Title: "CoralTrace - A new approach to understanding climate-induced reef crises"
- Supervisor: Prof. Dr. Wolfgang Kiessling

Friedrich-Alexander Universität Erlangen-Nürnberg

Erlangen, Germany

M.SC. IN GEOSCIENCE (MAJORING IN PALEOBIOLOGY AND EARTH SYSTEM RESEARCH)

Oct. 2017 - Sept. 2019

- GPA: 1.4 (Equivalent to a British Masters degree with Distinction)
- Thesis: "Origins and dispersal dynamics of Cenozoic marine plankton"

Ankara University

Ankara, Turkey

M.A. IN PHYSICAL GEOGRAPHY (WITH A YEAR IN TURKISH LANGUAGE)

Sept. 2013 - Aug. 2016

- GPA: 4.0 (Equivalent to a British Masters degree with Distinction)
- Thesis: "Urban flood modelling: the case of Bodrum"

King's College London

London, UK

B.SC (HONS) IN GEOGRAPHY

Sept. 2009 - Aug. 2012

- First Class Honours
- Thesis: "The long-range transport of radionuclides released from nuclear accidents and the consequent exposure to communities"

Additional Training

Jul. 2020 Data visualization – the art/skill cocktail

Max Planck Institute for Demographic Research

Jun. 2020 Github Campus Advisor

GitHub

Jun. 2019 Applied Data Science with Python Specialization

University of Michigan (via Coursera)

Aug. 2019 Citizen Science – Innovation in Open Science, Society and Policy

German Centre for Integrative

Biodiversity Research (iDiv)

Halle-Jena-Leipzig

Feb. 2018 Modelling in Palaeoecology

University of Vienna

Working Experience

Reddot

Mauritius

DATA CONSULTANT

Mar. 2020 - present

- Consulting with clients on data-driven approaches for their solutions in industry
- Developing dashboards for decision-making

Mauritius Wildlife Foundation

Mauritius

CONSERVATION BIOLOGIST

Feb. 2013 - Sep 2013

- Monitoring the behaviour of endemic birds at various locations for conservation purposes

Teaching Experience

LIST OF COURSES

Introduction to R	All levels. Basic data structures and control flows of the R programming language.
Analytical Paleobiology	Masters Level. Foundational and cutting-edge analytical methods in Palaeontology with a focus on R.
Programming & Statistics	Masters Level. Advanced statistical and analytical methods in Paleontology with a focus on R

CO-SUPERVISION OF STUDENTS

Master's thesis	1 student with Prof. Wolfgang Kiessling
Other Master's Research Projects	2 students with Prof. Wolfgang Kiessling, 1 student with Dr. Kenneth De Baets
Bachelor's Thesis	1 student with Dr. Kenneth De Baets

Awards and Honors

2018	Poster Prize	<i>Palaeontological Association</i>
2013-2016	Türkiye Burslari (scholarship for master studies)	<i>Turkish Government</i>

Grants

Paleosynthesis

Friedrich Alexander Universität

DIVERSITY DYNAMICS AND CRISES IN PALEONTOLOGY

Dec 2020 - present

- Co-leading (Co-PI) a workshop to bring together researchers from various cultural, socioeconomic and research backgrounds to develop guidelines on ethical and fairer international collaboration
- Currently in the organisation process
- Funding amount: € 2,000

Current Memberships

- International Coral Reef Society (ICRS)
- Palaeontological Association, UK (Palass)
- Geological Society of America (GSA)
- Young Modellers in Ecology (YoMos)
- Data Visualisation Society

Service

ADMINISTRATIVE

2019-2020	Student representative for the appointment of the new professor	<i>Friedrich Alexander Universität</i>
2021	Student representative for the appointment of the "Akademischer Rat"	<i>Friedrich Alexander Universität</i>

PROFESSIONAL SOCIETIES AND CONFERENCES

2020- present	Co-chair	<i>SVP Myanmar Advisory Group</i>
2019	Co-chair for session "Physiology in Deep Time"	<i>Annual Meeting of the 'Paläontologische Gesellschaft'</i>

OUTREACH

2018	"Markttage des Wissens" (Knowledge market days)	<i>Friedrich Alexander Universität</i>
2019	Girl's day	<i>Friedrich Alexander Universität</i>
2020	Mädchen-und-Technik Praktikum (Girls and technology)	<i>Friedrich Alexander Universität</i>
2020	Lange Nacht der Wissenschaften (co-organiser for the Geozentrum)	<i>Friedrich Alexander Universität</i>
2021	Girl's day	<i>Friedrich Alexander Universität</i>
2020-present	Member of the translation and instagram team	<i>International Coral Reef Society</i>
2019-present	Leader of the social media team	<i>Climate Change Action Team</i>

INTEREST IN THE MEDIA

22-Mar-21	Decolonizing the Hunt for Dinosaurs and Other Fossils (by Asher Elbein)	<i>New York Times</i>
07-Apr-21	[Podcast] Decolonising Paleontology	<i>Top of Mind with Julie Rose</i>
15-Apr-21	This ancient shark fossil is exquisite. But some researchers wonder if they'll be able to study it	<i>Science</i>
02-Jun-21	[Podcast] Episode 340: A new Parasaurolophus-like crested dinosaur	<i>I Know Dino</i>

JOURNALS REVIEWED

- Paleobiology
- Journal of Biogeography
- Trends in Ecology and Evolution

Software Development

Koscis, A. T., & **Raja, N. B.** (2020). *Chronosphere: Earth system history variables*. <https://doi.org/10.5281/zenodo.3530703>

Pye, F., & **Raja, N. B.** (2019). FossilJ (Version v0.2.1). <https://doi.org/10.5281/zenodo.3336200>

Presentations

CONFERENCE PRESENTATIONS

Raja, N. B., Lauchstedt, A., Pandolfi, J. M., Kim, S., Budd, A. F., & Kiessling, W. (2020, October). Mismatches of threat status and actual extinctions in Quaternary reef corals. GSA Connects Online.

Raja, N. B., Dunne, E., Khan, T., & Nätscher, P. (2020, October). The overlooked realities of sampling bias. GSA Connects Online.

Raja, N. B., & Kiessling, W. (2019a, September). Origination and dispersal dynamics of Cenozoic marine plankton. Annual Meeting of the Paleontological Society (Paläontologische Gesellschaft), Munich, Germany.

Raja, N. B., & Kiessling, W. (2019b, September). Revisiting the long-term biodiversity dynamics of reef builders in a novel Bayesian frame- work. In: 13th International Symposium on Fossil Cnidaria and Porifera, Modena, Italy.

Raja, N. B., Steinbauer, M. J., & Kiessling, W. (2018, August). Spatiotemporal niche dynamics of marine organisms through deep-time. Crossing the Palaeontological – Ecological Gap, Leeds, UK.

INVITED GUEST LECTURES

Pal(a)eoPERCS

THE DIRTY TRUTH: SCIENTIFIC COLONIALISM IN PALAEONTOLOGY

- Invited guest talk for the virtual seminar series designed to showcase the research of Early Career Researchers in the paleosciences

Virtual
Dec. 2020

Royal Tyrrell Museum

ILLICIT FOSSILS: THE ETHICAL DILEMMA IN PROTECTING THE WORLD'S NATURAL HISTORY

- Invited guest talk for the Royal Tyrrell Museum Speaker Series

Virtual
Mar. 2020

Publications

REFEREED JOURNAL PAPERS

Raja, N. B., & Kiessling, W. (2021). Out of the extratropics: The evolution of the latitudinal diversity gradient of Cenozoic marine plankton. *Proceedings of the Royal Society B: Biological Sciences*, 288(1950), 20210545. <https://doi.org/10.1098/rspb.2021.0545>

Aydin, O., & **Raja, N. B.** (2020). Spatial-temporal analysis of precipitation characteristics in Artvin, Turkey. *Theoretical and Applied Climatology*. <https://doi.org/10.1007/s00704-020-03346-6>

Kiessling, W., **Raja, N. B.**, Roden, V. J., Turvey, S. T., & Saupe, E. E. (2019). Addressing priority questions of conservation science with palaeontological data. *Philos. Trans. R. Soc. Lond. B Biol. Sci.*, 374(1788), 20190222. <https://doi.org/10.1098/rstb.2019.0222>

Raja, N. B., & Aydin, O. (2019). Regionalisation of Precipitation in Mauritius: A Statistical Approach. *Meteorological Applications*, 26, 711–719. <https://doi.org/10.1002/met.1798>

Raja, N. B., & Aydin, O. (2019). Trend analysis of annual precipitation of Mauritius for the period 1981–2010. *Meteorology and Atmospheric Physics*, 131(4), 789–805. <https://doi.org/10.1007/s00703-018-0604-7>

Raja, N. B., Aydin, O., Çiçek, İ., & Türkoğlu, N. (2019). A reconstruction of Turkey's potential natural vegetation using climate indicators. *Journal of Forestry Research*, 30(6), 2199–2211. <https://doi.org/10.1007/s11676-018-0855-7>

- Raja, N. B.**, Aydin, O., Türkoğlu, N., & Çiçek, İ. (2018). Characterising the Seasonal Variations and Spatial Distribution of Ambient PM10 in Urban Ankara, Turkey. *Environmental Processes*, 5, 349–362. <https://doi.org/10.1007/s40710-018-0305-8>
- Raja, N. B.**, Aydin, O., Türkoğlu, N., & Çiçek, İ. (2017). Space-time kriging of precipitation variability in Turkey for the period 1976–2010. *Theoretical and Applied Climatology*, 129(1-2), 293–304. <https://doi.org/10.1007/s00704-016-1788-8>
- Raja, N. B.**, Çiçek, İ., Türkoğlu, N., Aydin, O., & Kawasaki, A. (2017). Landslide susceptibility mapping of the Sera River Basin using logistic regression model. *Natural Hazards*, 85(3), 1323–1346. <https://doi.org/10.1007/s11069-016-2591-7>
- Aydin, O., & **Raja, N. B.** (2016). Yağışın mekânsal dağılışında deterministik ve stokastik yöntemler: Mauritius örneği, Doğu Afrika (Deterministic and Stochastic Methods to Analyse the Spatial Distribution of Precipitation: The Case of Mauritius, East Africa). *Coğrafi Bilimler Dergisi/Turkish Journal of Geographical Sciences*, 114(1), 1–14.
- Raja, N. B., Lauchstedt, A., Pandolfi, J. M., Kim, S. W., Budd, A. F., & Kiessling, W. (n.d.). Morphological traits of reef corals predict extinction risk but not conservation status. *Global Ecology and Biogeography*.

PREPRINTS

- Raja, N., & Dunne, E. (2021). Publication pressure threatens the integrity of palaeontological research. *EarthArxiv*. <https://doi.org/10.31223/X5V32Z>
- Pye, F., **Raja, N. B.**, Shirley, B., Kocsis, Á. T., Hohmann, N., Murdock, D. J., & Jarochowska, E. (2019). ImageJ and 3D Slicer: Open source 2/3D morphometric software. *PeerJ Preprints*, 7, e27998v2. <https://doi.org/10.7287/peerj.preprints.27998v2>

WORKING PAPERS IN PREPARATION, UNDER REVISION OR REVIEW

- Kocsis, A. T., **Raja, N. B.**, & others. (in preparation). *The 'chronosphere' portal for integrated global ecological analysis*.
- Raja, N. B.**, Dunne, E., & others. (in preparation). *Colonial history and global economics distort our understanding of deep-time biodiversity*.
- Raja, N. B.**, Kiessling, W., & Pandolfi, J. M. P. (in preparation). *What makes reefs thrive?*