

# PaleoSynthesis

## Newsletter 08/2021



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 @PaleoSynth

### ☀ Summer greetings ☀

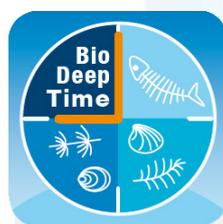
Time flies and the project continues to make great progress. We now have set up our new social media accounts instead of using the GeoZentrum Nordbayern - Paleobiology account, the smartphone app is on its home stretch, the workshops are picking up speed, our Big Questions working group is busy finalizing the questions, the number of our Twitter followers (@PaleoSynth) is steadily increasing, and we have chosen the winner of the Open Research Challenge.

We hope to continue making good progress in the future and look forward to continuing to work with you and to have your motivation and support. We are always happy to receive input and comments to improve our work!

### Workshop updates

Besides updates on the scientific progress of our workshops we are thrilled to also present our icons - fresh out of the FAU's design office. With the icons we want to give each of the individual workshops its own fresh „face“ and thus make them unique. We decided on blue tones as dominant color matching our PaleoSynthesis logo to highlight the integration of the workshops in our larger project.

Scan the QR code or click on the workshop titles to visit our workshop homepage.



#### BioDeepTime

The icon of BioDeepTime was designed to display the synthesis of time passing and the fauna changing over time.

*Update:* Building on the meetings from March, the BioDeepTime team met at the start of July to discuss preliminary efforts on compiling information from multiple databases. A version of these preliminary data exploring the effects of temporal scale will be presented at the 'Crossing the Palaeontological-Ecological Gap'-meeting in September.

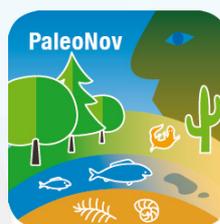
The team will continue to meet in smaller groups throughout the next several months to address specific issues (e.g., taxonomic and spatial scaling) affecting the timeseries analysis.



#### Diversity Dynamics and Crisis in Paleontology

Since the workshop is designed to bring together paleontologists from various cultural, racial, socio-economic and research backgrounds one main element of the icon is an etilized Earth. JEDI ("Justice, Equality, Diversity and Inclusion") specialists will play a major role and the aim of JEDI is symbolized by the orange lines creating a network. Hands of different bluish tone illustrate the different background of scientists.

*Update:* The first workshop in the series "Diversity Dynamics and Crises in Paleontology" will take place in fall 2021. The aim is to shed light on the range of skills, perspectives and sociological backgrounds of paleontologists from all over the world and to take a first step towards reducing disadvantages.



#### PaleoNovelty

PaleoNovelty is our 'newest' workshop, implemented in PaleoSynthesis. It is led by Tim Staples and John Pandolfi, both from the University of Queensland. The main task of the workshop is to develop a definition of novelty that is applicable at many spatial and temporal scales. **Paleontology** is seen as key to the understanding of the extent

and drivers of ecological **Novelties** as ecosystems have always been changing over time creating novel ecological states and systems. The PI's aim to “leverage paleontological understanding of ecological change over time“ and to find a „consensus on how to define or measure ecological novelty in a repeatable, quantitative manner“.

For PaleoNovelty the design of the icon was based on the evolution of new (‘novel’) ecosystems with chang-

ing environmental factors. Thus, it displays a transition from a humid landscape with a lake and woods to a drier landscape with cactuses and lizards. This is to illustrate the changing fauna and flora in an ecosystem adapting to changing conditions. The fossil layer represents a similar scenario but from a wetland environment (plant remain) towards a marine setting (ammonite). The face represents the observation by the human being.



### Big Questions

As of today, more than 170 scientists from all over the world are contributing to the development of the Big Questions in our working group.

We are thrilled that there are so many enthusiastic participants and have formed twelve topic-specific working groups to refine the > 500 sub-

mitted questions to a more focussed set of questions. Working groups have been meeting to accomplish this task since May and we will have our full set of preliminary questions by September.

Jansen has created a homepage for the Big Questions, so if you are curious you can scan the QR code or click on the title of this paragraph.



### Open Research Challenge

The winner of the **Open Research Challenge** is Joseph Flannery Sutherland, PhD candidate at the School of Earth Sciences at the University of Bristol in the UK.



Joseph submitted the best solution for cleaning fossil data (i.e., taxonomical errors) downloaded from the PBDB. This became necessary as our knowledge on fossils and paleontology continuously grows. However, over time names of taxa might have changed. With his code, developed

for R, paleontologists will be able to flag and correct inconsistencies so researchers can work more efficient without wasting too much time on “manual” corrections that are prone to errors.

Wolfgang Kiessling says: “The code developed by Joe Flannery Sutherland is a big step towards ridding the datasets of inconclusive and erroneous data. I am sure it will result in many highly interesting papers which, in turn, contribute to the overall quality of research in the field.”

*We will keep you updated on the official publication of the code!*

### App development

Work has been stepped up on the interactive map that will display fossil finds and the corresponding rock layer; this will combine PBDB and MacroStrat. User registration has been further developed and functionalities have been added. The next step



will be the installation on a FAU computer and the focus on the option “find registration”, i.e., the possibility for users to actively contribute data that will be checked by experts. The development of a communication function between users and the optimization of the upload from the app are also in the final stages. With our progress made FossilDiscovery is on its home stretch!

### Social media



We decided to increase our presence in the social media.

So besides Twitter (@PaleoSynth) you can also follow our regular updates on Facebook and Instagram now.

Search for the *paleosynthesisproject!*

☀️ Have a great summer!  
Barbara & Jansen